

Product information

Display module LCD graphic, 3 buttons

AMI11603
for 256 flats



Note on the validity of this product information

This product information contains specific information on the modules. It is only valid in combination with the enclosed product information Module of the series AMI in front-door stations.

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Scope of delivery

1x	display module LCD graphic AMI11603-00xx
3x	distance foil 0.5 mm
1x	connection cable with 4 pins
4x	securing nut M4
1x	product information display module LCD graphic, 3 buttons AMI11603
1x	product information modules of the series AMI in front-door stations

Introduction

Notes on this product information



This product information refers exclusively to qualified electricians.

The product information contains important notes on intended use, installation and initial operation. Please, keep the product information at a suitable place, where it is easily accessible for maintenance and repair reasons. All product information are available in the download area at www.tcsag.de.

Used symbols and warning notices

Symbol	signal word	Explanation
	DANGER!	The signal word describes an endangering with a high level of risk. Failure to observe this warning will result in death or very serious injury.
	WARNING!	The signal word describes an endangering with a medium level of risk. Failure to observe this warning could result in death or very serious injury.
	CAUTION!	The signal word describes an endangering with a low level of risk. Failure to observe this warning could result in a minor or moderate injury.
	ATTENTION!	The signal word indicates, that damages on equipment, environment and property can occur.

Further used symbols



important note or important information



Step



cross reference For further information on this topic, see source



list, list entry 1 level



list, list entry 2 level



Explanation

Safety instructions

General safety regulations



Assembly, installation, commissioning and repair of electronic devices must be carried out by qualified electricians.
Observe the latest regulations and standards for system installations.



WARNING! Danger to life due to electric shock

Observe the safety regulations according to DIN VDE 0100, when working on main power connections of 230 V.



When installing TCS:BUS systems the general safety regulations for telecommunication systems according to VDE 0800 must be observed. Inter alia:

- separated cable routing of high and low voltage lines,
- minimum distance of 10 cm in case of a common cable routing,
- use of separators between high and low voltage lines within shared cable ducts,
- use of standard telecommunication lines, e.g. J-Y (St) Y with 0.8 mm diameter,
- already existing lines (modernisation) with deviating cross-sections can be used in compliance with the loop resistance.

Requirements to protect against lightning



ATTENTION! Device damage due to over-voltage

By suitable lightning protection measures it has to be ensured that the electric voltage of 32 V DC at each connection is not to be exceeded.

Product description

Intended use

The display module LCD graphic AMI11603 is a module of the front-door station series AMI. The display module LCD graphic AMI11603 is suitable for the operation in TCS video systems and combined audio / video systems. The display module can be used only in combination with a built-in door loudspeaker module AMI11x0, a codelock module AMI11200 or another module with a 4-pin connection cable. The display module cannot be combined with the jogwheel module AMI10400 and the keypad module AMI10300. In combination with the jogwheel module AMI10410 (with reduced speed) a quick and easy selection within the list is feasible. In combination with the codelock module AMI11200 (operating mode: keyboard) a direct input of flat numbers at the codelock module is possible.



For applications, which differ from the intended use or goes beyond it, the manufacturer accepts no liability.

Short description

- for up to 256 flats
- fully graphical, monochrome display with 160 x 104 pixel, white backlight
- residents can be called via an alphabetical sorted name list (optionally via input of the flat number or access code via codelock module)
- language can be changed, also non-Latin characters can be displayed

- 3 illuminated buttons (smart keys) for an easy operation
- connection via a 4-pin service socket of the built-in door loudspeaker module AMI11100
- further connection for outgoing connection to another module
- acknowledgement tone output via central module (e.g. built-in door loudspeaker module)
- optical error indication
- resident data base: 256 data sets (names with 24 digits, flat number with 6 digits, 2 serial numbers per resident, max. 10-digit call number for telephone direct dial) ^{a)}



The EEPROM data base is not compatible with AD1 resp. AD2.

- configuration only with the configuration software configu™
- update via ISP interface feasible

a) Options in case of activated function: FBO1100 direct dial

Device overview

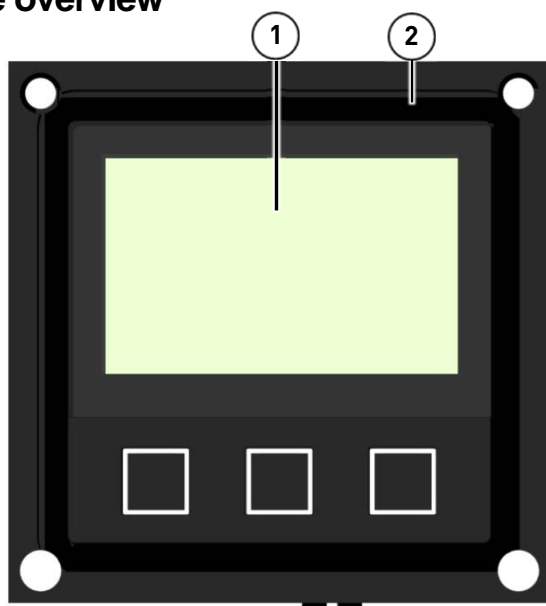


Fig. 1: Front view

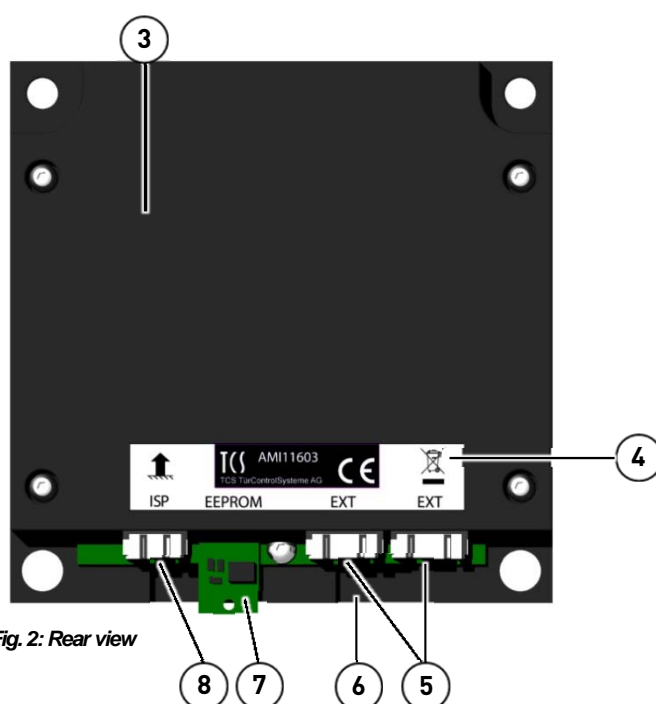
















Fig. 2: Rear view

- | | | | |
|---|------------------------|---|--------------------------------------|
| 1 | display with backlight | 5 | 2 connections with 4 pins (EXP) |
| 2 | front panel sealing | 6 | drainage channel for condensed water |
| 3 | housing | 7 | EEPROM |
| 4 | type label | 8 | connections with 3 pins (ISP) |














Indication and operating elements

The display module LCD graphic AMI11603 is equipped with 3 smart keys as operating elements. The function of this smart keys differs, depending on the displayed screen.






Legend button assignment

	no reaction - button is not assigned
	call up input flat number / telephone number
	call up name list (resp. initial character, if configured in this way)
	jump to the next character
	start entry code number
	call up name list (resp. initial character, if configured in this way)
	back / repeat entry
	delete character to the left of the cursor
	back to the idle screen, end voice connection
	call the selected call destination (name or flat number)
	end and confirm entry
	select previous name (line) from the name list
	select succeeding name (line) from the name list
	call up additional information after a door call (speech channel is busy; serial number 1 and 2 acknowledged)

Legend actions

	indoor station(s) is (are) called		breakdown (see page 18)
	indoor station could not be called (ring tone is switched off, indoor station 1 and/or 2)		error ^{a)}
	voice connection; speech channel is not busy		temperature sensor was not found (check serial number, temperature sensor)
	voice connection terminated; speech channel is busy		acknowledgement of indoor station with serial number 1 OK
	code number entry		acknowledgement of indoor station with serial number 2 OK
	code number known, door opener is triggered		acknowledgement serial number 1 not OK (analogue SN 2)
	code number unknown, door opener is not triggered		

a) in combination with the following symbols:

-  The serial number is unknown or no data set is available.
-  An unknown indoor station has start a voice connection.
-  No code number entry before pressing the  button or the code number is unknown.
-  An unknown indoor station is called.

Technical data

supply voltage	+24 V ± 8 % (power supply and control unit)
input current in resting position	I(a) = 0.11 mA, I(P) = 7.8 mA
max. input current:	I(Pmax) = 86 mA
acceptable ambient temperature	-25 ... +55 °C
housing	aluminium, anodised
display	plastics
buttons	plastics with insert made of aluminium anodised
dimensions (in mm)	H 105 x W 105 x D 22
weight	270 g
3-wire technique necessary!	

Mounting and installation

Requirements to the installation location

- Harmful environmental conditions can lead to a shortened life cycle or to malfunctions.
- Install and operate the display module AMI11603 not at locations with direct solar radiation or inappropriate temperatures (see. **Fehler! Verweisquelle konnte nicht gefunden werden.**, page **Fehler! Textmarke nicht definiert.**).

Connecting the lines

Internally connect the module in the front-door station

The display module AMI11603 can be connected to a built-in door loudspeaker module AMI111x0 or to modules with a 4-pin connection cable.



First install the AMI modules into the front panel, than wire them together.

Connection to built-in door loudspeaker module AMI11100, codelock module AMI11200 and jogwheel module AMI10410

At the built-in door loudspeaker module AMI11100:

- ▶ Remove the terminal cover (3).
- ▶ Open the cap of the service opening (2).
- ▶ Plug the 4-pin connection cable on the service plug in the service opening.
- ▶ Guide the cable below the cap of the module (1) out to the terminals.
- ▶ Close the service opening and the terminal cover.
- ▶ Connect the cable of the built-in door loudspeaker to the display module.
- ▶ Connect the codelock module AMI11200 and the jogwheel module AMI10410.



Commissioning

The AS addresses of the bell button modules and the built-in door loudspeaker module resp. display module have to be identically to establish a connection.

- ▶ Adjust the AS addresses to the same value and block them.

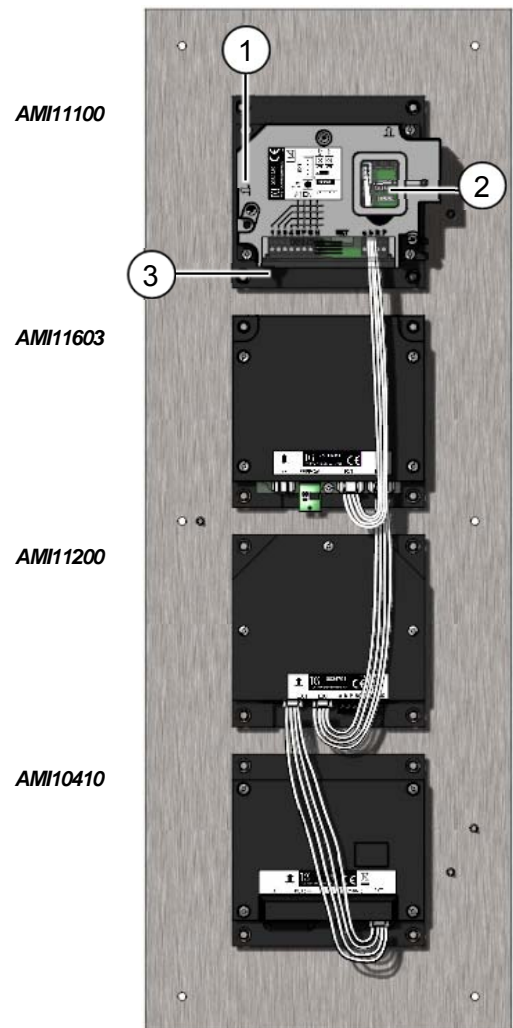


Fig. 3: ZAU2004-0030 incl. AMI modules

Connection to TCS:BUS speech module AMI11110, codelock module AMI11200 and jogwheel module AMI10410

At the TCS:BUS speech module AMI11110:

- Connect the cable of the built-in door loudspeaker to the display module.
- Connect the codelock module AMI11200 and the jogwheel module AMI10410.

AMI11110

AMI11603

AMI11200

AMI10410

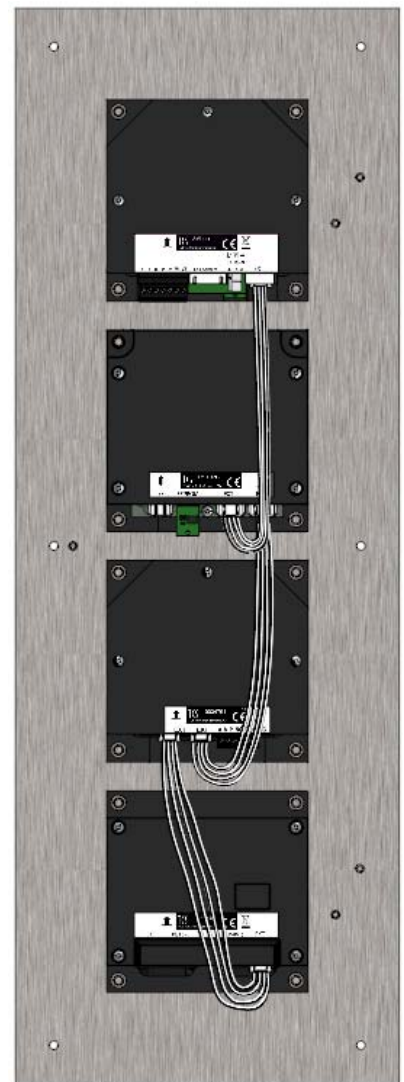


Fig. 4: ZAU2004-0030 incl. AMI modules

Example circuit

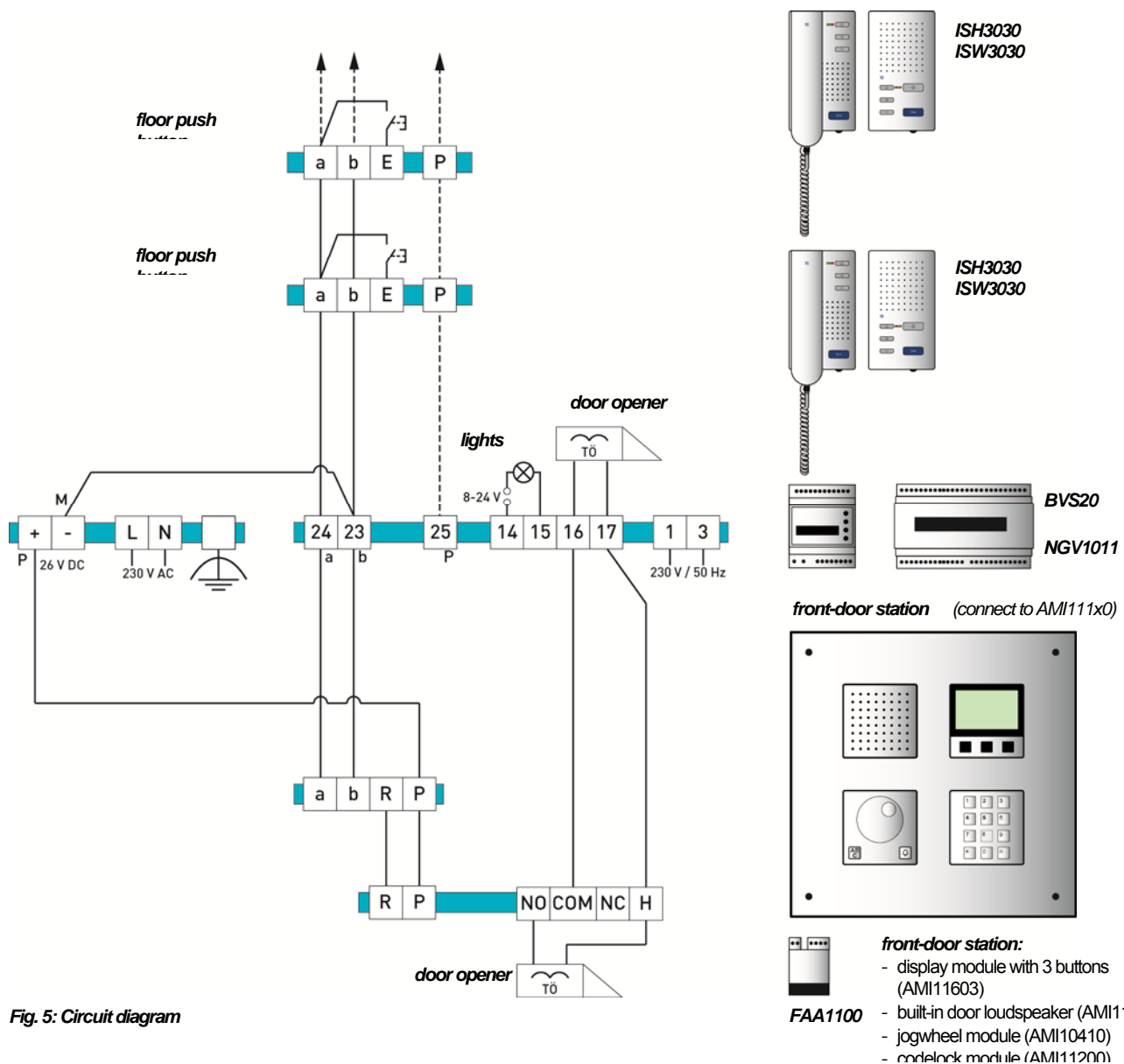


Fig. 5: Circuit diagram

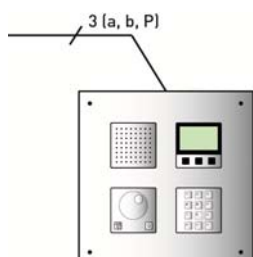


Note on FBS2100:

Optionally a temperature sensor (not enclosed in the delivery) can be used to indicate the temperature in the display.

For further information see TCS system manual. The TCS system manual can be downloaded at www.tcsag.de.

Wiring diagram



Initial operation

Operating modes

operating mode \ possible functions	selection resident list	entry flat number	code entry	selection initial character	direct entry of the call number for FBO1100 ^{a)}	transfer of the call number with control function for FBO1100 ^{b)}
Standard (stand alone or with jogwheel module)	X	-	-	X	-	X
Basic (with codelock module)	-	X	X	-	X	X
Extended (with codelock module and jogwheel module)	X	X	X	X	-	X

a) Only possible, when the AD2 mode is activated and the codelock module is connected. The call number with 10 digits can be entered directly via the codelock module.

b) Only possible, when the AD2 mode is activated. Transferring the call number is implemented by selecting the name or the flat number.

- ▶ Install all AMI modules completely and establish all internal connections.
- ▶ Install the devices of the system completely.
- ▶ Proof the a-, b- and P-wire against each other on short-circuit.
- ▶ Switch on the mains voltage.

Device start-up

After switching on the device, the start screen appears for 5 sec. with the following indications:

- software version of the device
- hardware version of the device
- device mode



The device mode is detected automatically (standard, basic or extended).

- Type of device

SW 1.0.0

HW 1.0.0

Standard

AMI11603

Fig. 6: device start-up standard

Standby mode

10 sec. after switching on the device, the start screen appears. The device is in standby mode.



In delivery state the TCS logo is displayed.

Standard (optionally with jogwheel module AMI10410)

Basic (only with codelock module)

Extended (with codelock module and jogwheel module)



Fig. 7: standby mode Standard



Fig. 8: standby mode Basic



Fig. 9: standby mode Extended

Configuration

- The display module can be configured exclusively with the configuration software configo™.
- The module cannot be configured manually via the buttons as well as via the Service Device TCSK.
- The configuration software configo™ can be used also by the end user, e.g. the property management to update the name list.
- For the configuration you need the maintenance package FBI1210-0 (or FBI1200-0).
- All configuration data and the resident data base are stored on the EEPROM.
- Additionally these data are transferred automatically to the EEPROM after each configuration. The EEPROM can be removed if necessary, without functional impairment.

Factory settings

The device is equipped with an EEPROM. Within the EEPROM, the following device settings are stored ex works:

mode backlight	automatic operation ¹⁾
start screen	TCS logo
data base	no data sets
temperature sensor ^{a)}	deactivated
unit of temperature	°C (Celsius)
indication in AD2 mode	activated
FBO1100 direct dial	deactivated
activate pre-selection via initial character	deactivated

a) temperature sensor:

A temperature sensor, flush-mount, single, FBS2100-0600 can be used.

Preset times

timeout for backlight in automatic mode	30 sec
error detection "button sticks" (press the button longer than 25 sec)	25 sec

Configuration options

function	config TM as of version 1.8.x.x
create resident list (allocation of the 1st and 2nd indoor station to name and number)	x
Determine the AS address	x
activate the temperature indication	x
switch over the temperature specification to unit °F (Fahrenheit)	x
activate the AD2 mode ^{b)}	x
activate FBO1100 direct dial ^{b)}	x
activate chapter resident list pre-selection ^{b)}	x
select mode backlight (always OFF, always ON, automatic mode ^{a)} , depending on the brightness)	x
select start screen (TCS logo, temperature, none)	x

a) *automatic mode:*

The backlight is switched off in standby mode. The user can activate it at the front-door station and it is switched off automatically after 30 sec. The backlight is activated by one of the following actions:

- *pressing a smart key at the display module*
- *pressing a button at the code lock module (operation mode keyboard)*
- *operating the jogwheel module*
- *pressing a button at the bell button module*

b) *Explanations:*

AD2 mode is activated: the name of the resident is displayed. Not activated: only the flat number is displayed.

FBO1100 direct dial is activated: a telephone can be called directly (call number with max. 10 digits in combination with AMI11603) activate pre-selection via initial character: when pressing a smart key, a list of available initial characters is displayed from which you can get to the total list of the selected character (recommended only for extensive resident data bases).

Operation

Calling / speaking to residents via

... smart keys (display module)

Standby mode

- standard

Selecting a name



Select initial character:

- Press one of the smart keys . All initial characters, that are available in the list, are displayed.



An empty resident data base is displayed with



Browse through the initial character:

- Press the smart key  repeatedly until the required initial character is marked (fig. 12).
- Confirm the selection with the smart key . The resident list is displayed. The first name with the selected initial character is marked (fig. 13).




The list of available initial characters is only displayed, if the *chapter pre-selection resident list* was activated via the configuration software configTM. Otherwise the resident list is displayed immediately.

Browse through the resident list:

- Press the smart key  to browse downwards resp. the smart key  to browse upwards.

Calling a resident

- Press the smart key . The selected resident is called and the name is displayed (fig. 14).



If the telephone does not respond resp. the front-door station receives no acknowledgement, the indication appears (fig. 15).



Fig. 10: standby mode Standard



Fig. 11: select initial character



Fig. 12: browse



Fig. 13: resident list



Fig. 14: call resident



Fig. 15: telephone does not respond

Speaking

After accepting a call, the indication *established voice connection* is displayed (fig. 16).



Fig. 16: established voice connection

... jogwheel module AMI10410

Standby mode



- standard

Selecting a name

select initial character:

- ▶ Turn the jogwheel. The resident is displayed and the first name is marked (fig. 18).
- ▶ Alternatively press the *ABC button* at the jogwheel module. All initial characters, that are available in the list, are displayed.

Browse through the initial character:

- ▶ Turn the jogwheel until the required initial character is displayed.
- ▶ Confirm your selection with the smart key  or . The resident list is displayed and the first name with the required initial character is marked.

Browsing through the resident list:

- ▶ Turn the jogwheel until the required name is marked.



Fig. 17: standby mode Standard



Fig. 18: resident list



Fig. 19: list of available initial characters



The list of available initial characters is only displayed, if the *chapter pre-selection resident list* was activated via the configuration software *configo™*. Otherwise the resident list is displayed immediately.



Fig. 20: resident list

Speaking

After accepting a call, the indication *established voice connection* is displayed (fig. 23).



Fig. 21: established voice connection

... codelock module AMI11200

The operation is implemented via codelock module within keyboard mode^{a)} and via smart keys.

Standby mode

- Basic



Fig. 22: standby mode Basic

Entering the flat number



If the flat number is known, you can enter it directly.

- ▶ Enter the flat number (fig. 25) with the buttons 0 to 9 at the codelock module.
- ▶ To correct your entry press the smart key



Fig. 23: flat number

Calling a resident

- ▶ Press the smart key or the *#-button* at the codelock module. The selected flat number ^{b)} is called and displayed (ill. 26).



If the telephone does not respond resp. the front-door station receives no acknowledgement, the indication appears (fig. 26).



Fig. 24: Calling the flat number



Fig. 25: telephone does not respond

Speaking

After accepting a call, the indication *established voice connection* is displayed (fig. 26).



Fig. 26: established voice connection

a) Select via configuration software configoTM (> access control > codelock module AMI11200: keyboard mode).

b) Enter under apartment number in configoTM: Flat number, serial number of the indoor station, number of the data set, telephone number or number of the control function when connecting to the TK system.


Door release via code entry

The operation is implemented via codelock module within keyboard mode^{a)} and via smart keys.


Standby mode

- Basic

Start entry code number

- ▶ Press the smart key  or the #-button at the codelock module. The indication code entry is displayed (fig. 30).

Entering the code number

- ▶ Enter the code with 1 to 4 digits at the codelock module.
- ▶ Confirm your entry with the smart key  or the #-button at the codelock module.




- If the code is valid, the door opener is triggered (fig. 32).
- If the code is invalid, the door opener is not triggered (fig. 33). Press the smart key  to enter the code again.
- If the code is entered wrong 3 times, the code entry is blocked for 3 min.



Fig. 27: standby mode Basic



Fig. 28: Code entry



Fig. 29: 4-digit code



Fig. 30: correct code entry

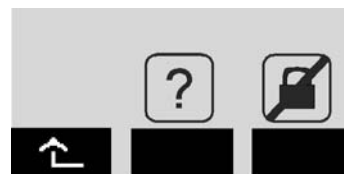


Fig. 31: wrong code entry

a) Select and determine via configuration software configoTM (> access control > codelock module AMI11200: keyboard mode.

Repair

Replacing the EEPROM

All configuration data and the resident data base are stored on the EEPROM. Additionally these data are transferred automatically to the EEPROM after each configuration.

If the display module needs to be exchanged, the EEPROM storage can be removed from the defect module and can be inserted into the new module.



Switch off the mains voltage at the front-door station.

- ▶ Open the front-door station.
- ▶ Disconnect the display module from the mains voltage and pull out all connecting plugs.
- ▶ Deinstall the defect display module from the front panel.
- ▶ Remove the EEPROM **(1)**.
- ▶ Install the new display module into the front panel.
- ▶ Plug the EEPROM on the pins of the new display modules.



Ensure the correct installation of the EEPROM into the display module. The component side **(2)** of the EEPROM must be visible (fig. 34).

- ▶ Connect the display module again.
- ▶ Switch on the mains voltage. The data is transferred automatically to the new EEPROM.



If the data transfer should be incorrect, press all 3 smart keys simultaneously until the device restarts (after around 10 sec.).

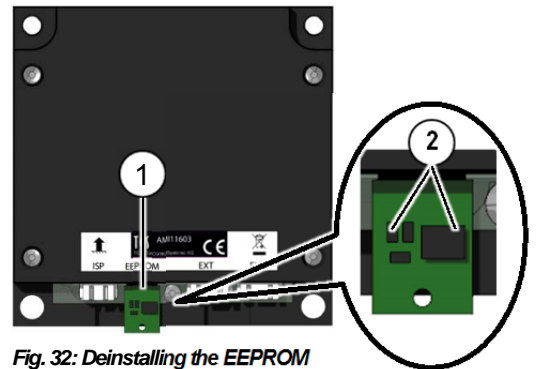


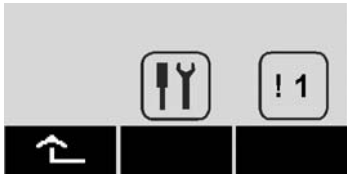



Fig. 32: Deinstalling the EEPROM

Trouble shooting

Error pattern / problem	Possible causes	Solution
	a-wire is not connected	connect the a-wire, device is in standby mode again
	a- and P-wire are interchanged or short-circuited	change a- and P-wire or remove short-circuit device is in standby mode again
	EEPROM error: defect, is missing or plugged incorrectly	Ensure that the module is voltage-free! Plug the EEPROM (correctly) on the pins. The component side must be visible. Connect the module again. device is in standby mode again
	Button sticks (press longer than 25 sec)	release the button, device is in standby mode again

Cleaning



ATTENTION Loss of function due to short-circuit and corrosion.

Water and cleaning agents can enter the device. Electronic components can get damaged due to short-circuit and corrosion.

Avoid water and detergents from entering the device. Clean the device with a dry or slightly wet cloth.



ATTENTION! Damages on the surface of the device.

Abrasive and scratching detergents damage the surface of the device.

Do not use any abrasive detergents!

Remove stronger stains with a pH neutral household cleaner.

Conformity



Declarations of conformity are available for download under www.tcsag.de.

Information on disposal



Dispose the device separately from domestic waste via a collection point for electronic scrap. Ask your county administration for the responsible collection point.



Dispose the parts of the packaging in collecting tanks for cardboard and paper resp. plastics.

Warranty

We offer a **simplified processing** in case of warranty for qualified electricians.

- Please contact the **TCS HOTLINE** under hotline@tcsag.de.
- Our **standard terms and conditions of sale** you'll find under www.tcsag.de.

Spare parts, accessory

Short text	Article number
Spare parts	
EEPROM for AMI11603	0035310
Accessory	
Maintenance package	FBI1210-0
temperature sensor, flush-mount, single	FBS2100-0600
flush-mount kit or K3 post for 1 to 6 modules	ZAU200x

Service

Please send your questions and inquiries to

hotline@tcsag.de

Headquarters

TCS TürControlSysteme AG, Geschwister-Scholl-Str. 7, 39307 Genthin | Germany
FON: +49 (0) 3933/8799-10, FAX: +49 (0) 3933/879911, www.tcsag.de

TCS Hotline Germany

FON: +49 41 94 / 9 88 11 88, Fax: +49 41 94/ 9 88 129 Mail: hotline@tcsag.de

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