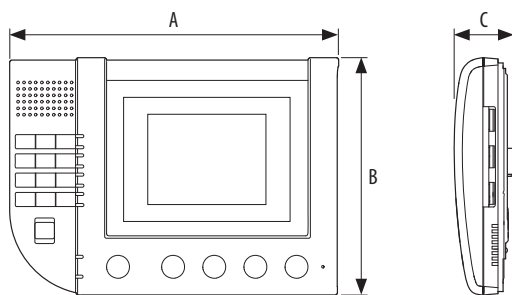


**Description**

D45 System colour handsfree internal unit with 3.5" LCD backlit display. Complete door entry functions with alarms management. International standard SOS pushbutton and keyboard for intercom function and programming device. Direct call to switchboard function. 12 ring tones selectable for different call types. Surge protection. Wall mount installation.

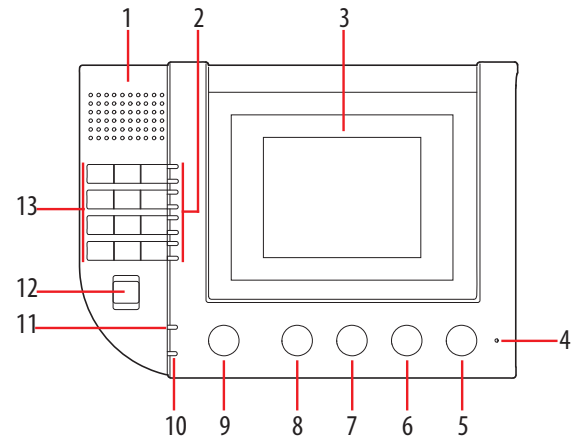
**Technical data**

Power supply: 30 Vdc  
 Stand by absorption:  $\leq 20 \text{ mA @ } 30 \text{ V}$   
 Max. operating absorption:  $\leq 85 \text{ mA @ } 30 \text{ V}$   
 Operating temperature:  $(-10) - (+40) \text{ }^\circ\text{C}$   
 LCD display resolution: 320 x 240

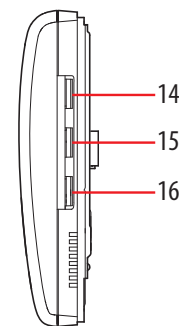
**Dimensional data**

A (mm)	B (mm)	C (mm)
193,5	139,5	29

Front view

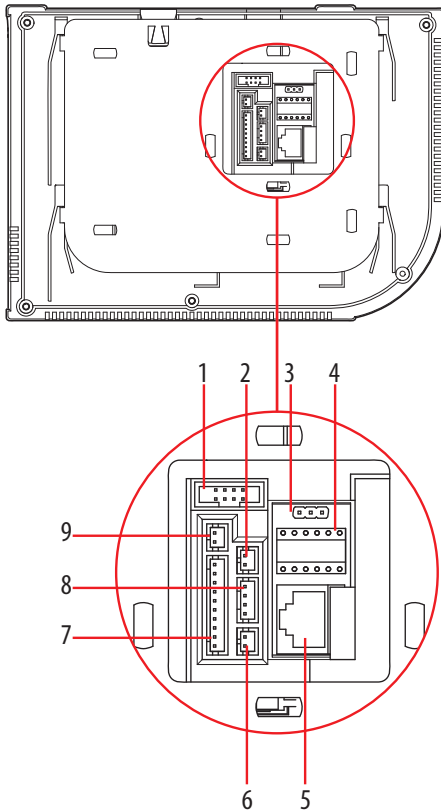


Side view

**Legend**

1. Loudspeaker
2. 1 to 8 defence status area LEDs
3. 3.5" LCD backlit display
4. Microphone
5. Door lock activation key
6. Monitoring key
7. Call to the switchboard key
8. Audio connection activation/deactivation key
9. SOS pushbutton
10. Information status LED
11. Connection status LED
12. Shortcut key
13. Numerical keyboard
14. Ring volume control knob
15. Display brightness regulation knob
16. Display colour regulation knob

Rear view



**Legend**

- 1. Serial interface connector (ex. configuration download)
- 2. Door lock device connector
- 3. MASTER / SLAVE selection jumper
- 4. Configurators housing
- 5. RJ45 System BUS connector
- 6. SOS alarm connector
- 7. Alarm sensors connectors
- 8. Analogue small entrance panel connector
- 9. Anti removal (tamper) sensor connector

**Configuration**

Device **MUST** be configured for following parameters:

○	○	○	○	○	○
F	F	I	I	#I	#I
○	○	○	○	○	○

FF : Floor number  
 II : Apartment number  
 #II : Maximum apartments quantity per floor in a riser

Two different configuration modes available for whole system:

configuration **MODE 1** and configuration **MODE 2**. The main characteristics for each configuration mode are listed below.

When the biggest number of #FF in whole system is ≤ 20, and the biggest number of #II is ≤ 4, and the total risers number is ≤ 50, we recommend to choose (**MODE 1**) configuration for system.

When the biggest number of #FF in whole system is more than 20, or the biggest number of #II is more than 4, we suggest to use (**MODE 2**) configuration to setup #FF (choose the biggest number #FF of system) and #II (choose the biggest number #II of system), then calculate total IU number of system. If the total number (#FF \* #II \* R) is less or equal 4000, use of (**MODE 2**) is suggested.

POSITION	MODE 1	MODE 2
F	FF	FF
F		
I	II	II
I		
#I	Default for #II is 04, need not connect the configurator	II (#II setup using same value for all system handsets)
#I		

### Configuration

Two different device configuration ways available:

Configuration settings by device keyboard - WAY 1

Configuration settings by inserting physical configurators - WAY 2

Configuration settings by device keyboard - WAY 1:

When the handset is in standby and all zone alarms are disabled, press "#", then enter the fixed installer password 686868, and press "#" to confirm. If the wrong password is entered, 3 short beeps will be heard; if the password is correct, an extended beep will be heard, and the unit will switch to installation setup status. The 8 alarm lights and the message light will be off.

INSTALLATION SETTINGS OPERATION LIST TABLE

SETUP	OPERATION CODE AND LIGHT STATUS	NEXT OPERATION	MEANING AND INFORMATION FOR THE OPERATION	REMARK	
Set room number for handset	11# 8 alarm lights and message light off	"FFI#"	correct parameter input: 1 long tone wrong parameter input: 3 short tones	Default room number: 101	
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tone		
Maximum apartments quantity per floor in a riser	12# 8 alarm lights and message light off	"II#" or "I#"	correct parameter input: 1 long tone wrong parameter input: 3 short tones	Range:1-99 Default:4; it can be set only when there is no setting for hardware	
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		
Set external SOS to be always on or always off	15# message light will indicate status of this setting item	1	SOS external switch or pushbutton always open (NO): message light on, 1 long tone	Default: always open	
		0	SOS external switch or pushbutton always close (NC): message light off, 1 long tone		
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		
Enable and disable function of monitoring Small EP	17# message light will indicate status of this setting item	1	enable: handset can monitor Small EP: message light on, 1 long tone	Default: cannot monitor Small EP. This function is available only when the function is set as Small EP function.	
		0	Shielded: handset can not monitor Small EP: message light off, 1 long tone		
		*	return to main menu of installation setting, 1 short tone		
		other	unsuccessful operation: 3 short tones		
Return all the parameters to default value	19# message light will indicate status of this setting item	1	Get all the default parameters: message light on, 1 long tone		
		0	Do not get all the default parameters: message light off, 1 long tone		
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		
Enable and disable sensors	21# Message light is off. 8 alarm lights will indicate status of each alarm zone	1#	1	1 alarm zone with sensor: LED 1 on, a long tone.	Default: (all) without sensor
			0	1 alarm zone without sensor: LED 1 off, a long tone.	
			*	return to previous menu, 1 short tone	
			other	Ineffective operation: 3 short tones	
		...	...		
		8#	1	8 alarm zone with sensor: LED 8 on, a long tone.	
			0	8 alarm zone without sensor: LED 8 off, a long tone.	
			*	return to previous menu, 1 short tone	
			other	unsuccessful operation: 3 short tones	
		*	return to main menu of installation setting, 1 short tone		
		other	unsuccessful operation: 3 short tones		
		Set NO and NC type of sensors	22# 8 alarm lights will indicate status of each alarm zone.	1#	
0	always-close (NC) sensor for alarm area 1: LED 1 off, 1 long tone				
*	return to previous menu, 1 short tone				
other	unsuccessful operation: 3 short tones				
...	...				
8#	1			always-open (NO) sensor for alarm area 8: LED 8 on, 1 long tone	
	0			always-close (NC) sensor for alarm area 8: LED 8 off, 1 long tone	
	*			return to previous menu, 1 short tone	
	other			unsuccessful operation: 3 short tones	
*	return to main menu of installation setup, 1 short tone				
other	unsuccessful operation: 3 short tones				

### Configuration

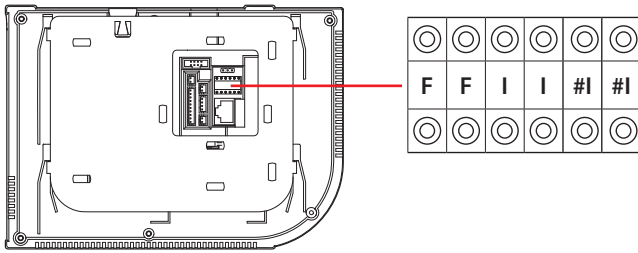
FROM PREVIOUS PAGE → Configuration settings by device keyboard - WAY 1:

INSTALLATION SETTINGS OPERATION LIST TABLE

SETUP	OPERATION CODE AND LIGHT STATUS	NEXT OPERATION	MEANING AND INFORMATION FOR THE OPERATION	REMARK	
Set infrared sensor	23# Message light is off. 8 alarm lights will indicate status of infrared sensor. Setting: infrared sensor: light of this alarm zone will be on. Non-infrared sensor, light of this alarm defence area zone will be off.	5#	1 0 * other	infrared sensor for alarm zone 5: LED 5 on, 1 long tone non- infrared sensor for alarm zone 5: LED 5 on, 1 long tone return to previous menu, 1 short tone unsuccessful operation: 3 short tones	Note: 1/2/3/4 alarm zone are defined as infrared alarm zones, door alarm, smoke alarm, gas alarm. They cannot be changed. 5/7 are defaulted as infrared alarm zones s. 6/8 alarm are defaulted as non-infrared alarm zones
		.....	.....		
		8#	1 0 * other	infrared sensor for alarm zone 8: LED 8 on, 1 long tone Non-infrared sensor for alarm zone 8: LED 8 on, 1 long tone return to previous menu, 1 short tone unsuccessful operation: 3 short tones	
		*		return to main menu of installation setup, 1 short tone	
		other		unsuccessful operation: 3 short tones	
Setting for Time delay after alarm set	24# The light of the zone indicates the parameter For example, if the parameter is 3, then LED 3 will on	1	delay 40 s: 1 long tone, only LED 1 will on	Default: 100 s only for thief area alarm	
		2	delay 100 s: 1 long tone, only LED 2 will on		
		3	delay 150 s: 1 long tone, only LED 3 will on		
		4	delay 210 s: 1 long tone, only LED 4 will on		
		5	delay 255 s: 1 long tone, only LED 5 will on		
		*	return to main menu of installation setup, 1 short tone		
		Other	unsuccessful operation: 3 short tones		
Setting for Time delay after alarm happens	25# The light of defence area give the parameter. For example, if the parameter is 3, then LED 3 will on	1	delay 40 s: 1 long tone, only LED 1 will on	Default: 40 s only for thief area alarm	
		2	delay 100 s: 1 long tone, only LED 2 will on		
		3	delay 150 s: 1 long tone, only LED 3 will on		
		4	delay 210 s: 1 long tone, only LED 4 will on		
		5	delay 255 s: 1 long tone, only LED 5 will on		
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		
Enable and disable sound alarm for thief	26# The Information LED indicates the setup state	1	enabled: if there is a burglar alarm, loudspeaker will emit a sound. Message light on, 1 long tone	Default: no sound	
		0	disabled: if there is a burglar alarm, loudspeaker will not emit a sound. Message light off, 1 long tone.		
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		
	*		exit main menu of installation setup, 1 short tone		
	other		unsuccessful operation: 3 short tones		
1) Doorbell function setup(if is doorbell function , it is not Small EP function)	16# The information LED to give setup state	1	Enable doorbell function, the information LED is on, 1 long tone.	Default: is not doorbell function, tt is Small EP function.	
		0	Disable doorbell function, the information LED is off, 1 long tone		
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		
2) Handset connection to Apartment interface function setup	13# The information LED to give setup state	1	handset has connected to the Apartment interface the information LED is on, 1 long tone,	Default: Handset not connected to the Apartment interface.	
		0	handset has not connected to the Apartment interface, the information LED is off, 1 long tone.		
		*	return to main menu of installation setup, 1 short tone		
		other	unsuccessful operation: 3 short tones		

**Configuration**

Configuration settings by device keyboard - WAY 2:



FF: Floor number  
 II: Apartment number  
 #II: Maximum apartments quantity per floor in a riser

Configuration examples:

**Example (A):**

The number of handsets is 1204, each floor has 4 handsets, the system configuration mode is **MODE 1**, the handset configuration should be as follows:

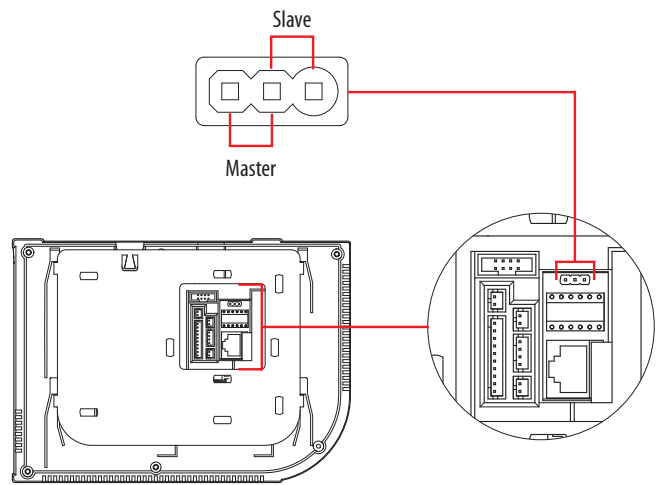
POSITION	CONFIGURATION VALUE	REMARKS
F	1	
F	2	
I	0	It is ok not to insert configurator 0
I	4	
#I		Because the default value of #II is 4, no configurator is needed
#I		

**Example (B):**

The number of handsets is 1206, each floor has 8 handsets. System configuration **MODE 2** is used. The handset configuration should be as follows :

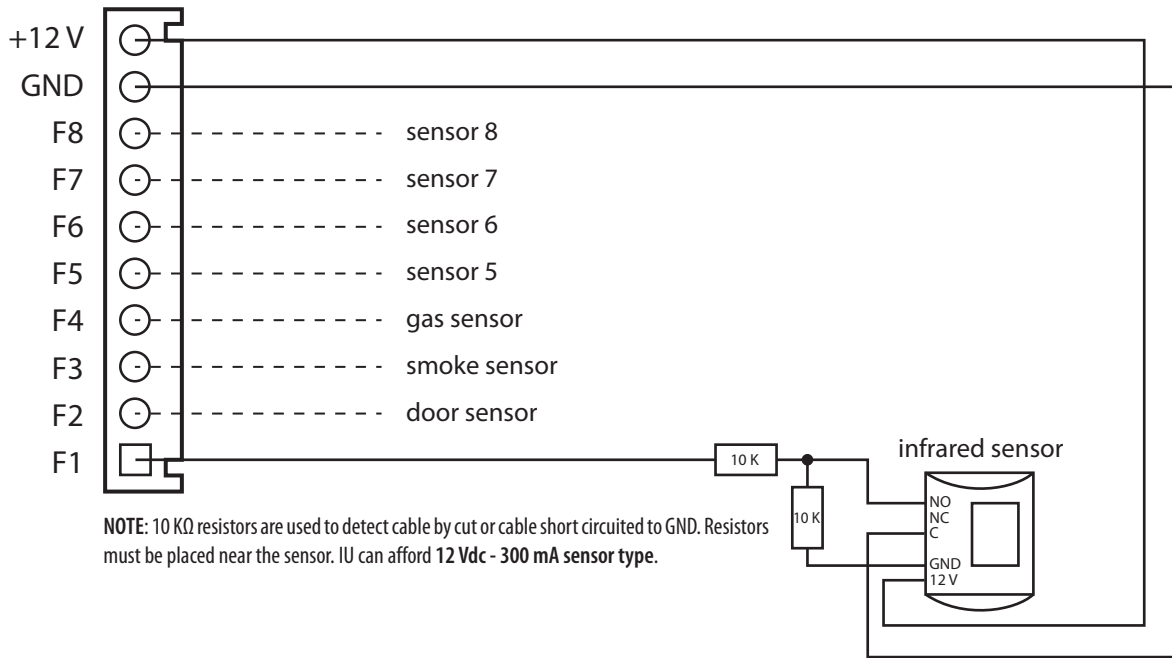
POSITION	VALUE	REMARKS
F	1	
F	2	
I	0	It is ok not to insert configurator 0
I	6	
#I	0	It is ok not to insert configurator 0
#I	8	

MASTER and SLAVE settings



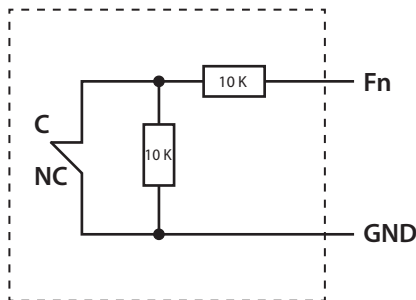
SET THE MASTER AND SLAVE HANDSETS	METHODS
Set as the master handset	
	Or not jump
Set as the slave handset	

**Wiring diagram - alarm sensors connections**

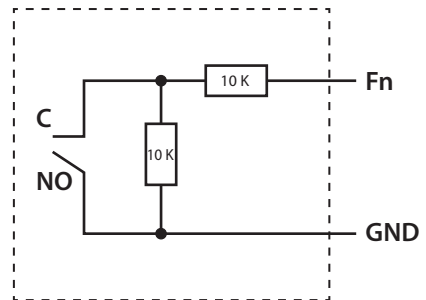


**Wiring diagram - NC & NO contacts connection**

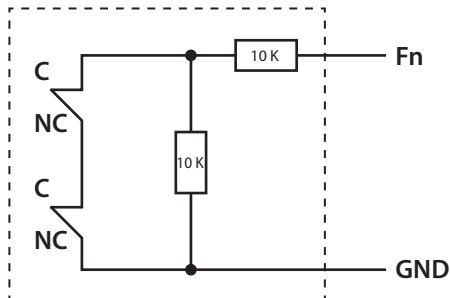
NC mode - SINGLE SENSOR



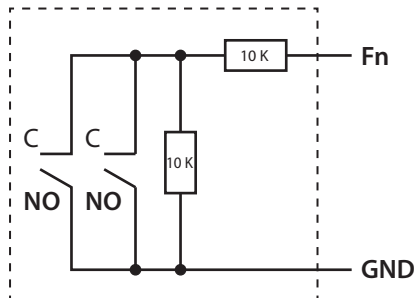
NO mode - SINGLE SENSOR



NC mode - MULTIPLE SENSORS



NO mode - MULTIPLE SENSORS



NC &amp; NO alarm sensors connection table

PIN	ALARM AREA	SENSOR TYPE	SENSOR TYPE	REMARK
F1	SENSOR 1	THEFT ALARM	INFRARED SENSOR	Can use short key to sensor active or idle
F2	SENSOR 2		DOOR SENSOR	
F3	SENSOR 3	FIRE ALARM	SMOKE SENSOR	Can't use short key to let sensor idle
F4	SENSOR 4		GAS SENSOR	
F5	SENSOR 5	THEFT ALARM	Infrared or non-infrared; Default is infrared sensor; User can set it to be non infrared	Can use short key to sensor active or idle
F6	SENSOR 6		Infrared or non-infrared; Default is non-infrared sensor; User can set it to be non infrared	
F7	SENSOR 7		Infrared or non-infrared; Default is infrared sensor; User can set it to be non infrared	
F8	SENSOR 8		Infrared or non-infrared; Default is non-infrared sensor; User can set it to be non infrared	
GND				
+ 12 V				