Power supply

323005

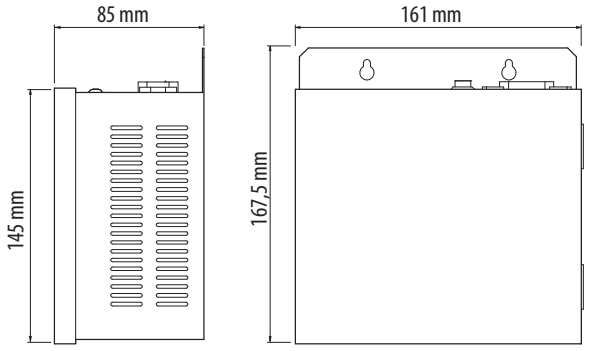
Description

D45 System power supply able to supply power on the data communication cable and simultaneously provide impedance matching for the audio channel. Protected against short circuit, if a DC output short cut occour, device will switch automatically to protected mode. Can be set to operate as main or auxiliary power supply. Wall mount installation.

Technical data

Input voltage:	100 – 265 Vac
Rated output voltage:	30.5 Vdc +/– 0.5 V
Rated output current:	2 A @ 30 V
Terminal rated output voltage:	27.6 Vdc
Terminal rated output current:	0.5 A
Operating temperature:	(-10)-(+40)°C

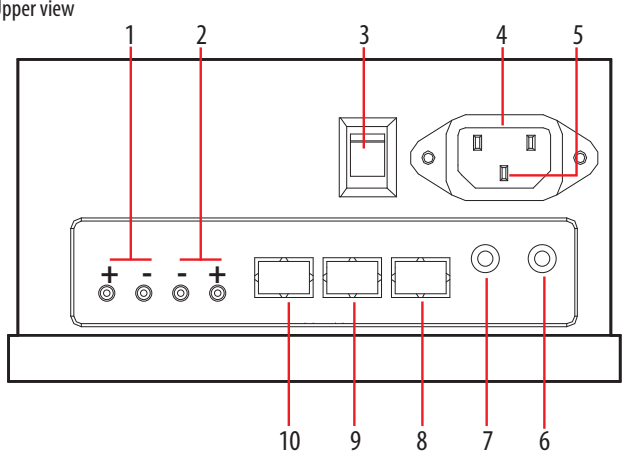
Dimensional data

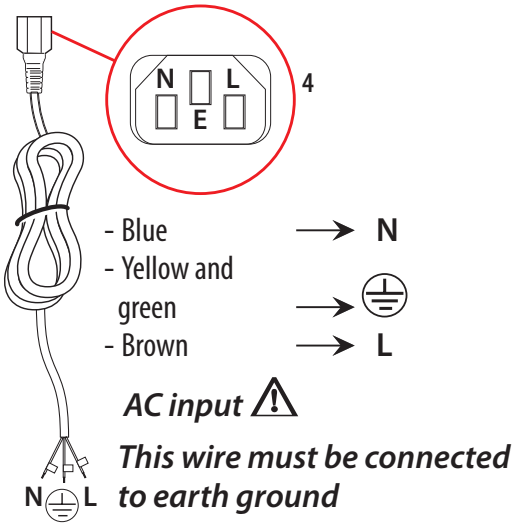


Legend

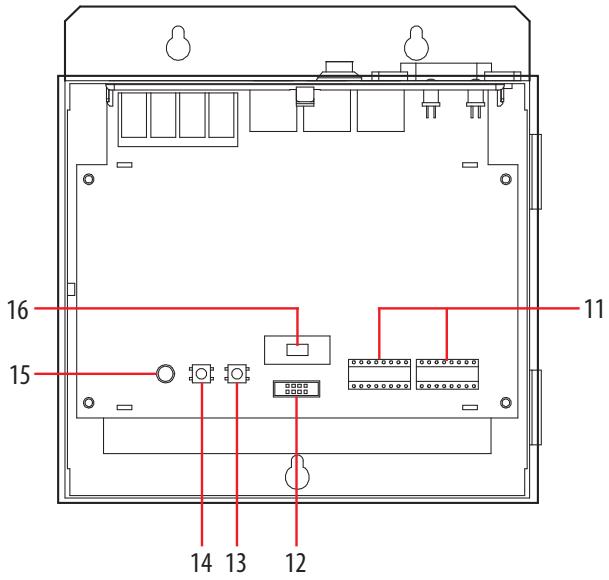
1. External battery connection (optional)
2. Power output connection
3. ON/OFF Switch
4. AC INPUT socket connector
5. Protect earth
6. Low voltage status LED: red light ON = low voltage
7. Power status LED: RED light ON = power OFF
   GREEN light ON = power ON
8. RJ45 System BUS connector
9. RJ45 System BUS + power connector
10. RJ45 System BUS + power connector
11. Configurators housing
12. Serial interface connector
13. S2 configuration pushbutton (NOT USED)
14. S1 configuration pushbutton (NOT USED)
15. Configuration status LED
16. Impedance setting switch (see Impedance switch settings)

Upper view





Internal view



Impedance switch settings

ON When impedance switch is **ON**, 323005 is set as **system power supply**: supply power to data communication cable and input audio impendance.

OFF When impedance switch is **OFF**, 323005 is set as **additional power supply**: will not supply power to data communication cable and cut audio impendance.

Configuration

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.

Device must be configured in order to set power supply's address, address range or floor range powered by device, power supply type (system supply,additional supply), alarm current that power supply offers to each IU, enable or disable smart power supply and PW management and select system configuration mode. Only with correct configuration of power supply, system can work normally.

Power supply must be configured for following parameters:

N	N	N	CF4	CF5	CF6	CF7
◎	◎	◎	◎	◎	◎	◎
N	N	N	FF min	FF min	#I	#I
◎	◎	◎	◎	◎	◎	◎

CF8	CF9	CF10	CF11	TYP	ASR	M	LE
◎	◎	◎	◎	◎	◎	◎	◎
FF max	FF max			TYP	ASR	M	LE
◎	◎	◎	◎	◎	◎	◎	◎

MEANING OF EACH CONFIGURATOR SOCKET PIN

CONFIGURATION	MODE 1 (1 PWS FOR EACH FLOOR)	MODE 2
N	NNN	NNN
N		
N		
CF4	FF Min	FF Min
CF5		
CF6		#II
CF7		
CF8	FF Max	FF Max
CF9		
CF10		
CF11		
Type	Type	Type
ASR	ASR	ASR
M	M	M
LE	LE	LE

NNN: Power supply address (range 1 to 256), only when Type = 1 power supply address will be valid. It means when Type = 0, no need to configurate NNN

FF Min: The floor number where this power management starts from

FF Max: The floor number where this power management ends (FF Max must be over or equal to FF Min)

#II: apartment number for each floor (at mode 1, the default number is 4, no setting is required)

Typ: Configuration position for power supply function. Used to enable or disable power supply management function and smart power function

ASR: Set how much current power supply will offer to each IU for alarm

M: Position to choose configuration MODE. Inserting configurator 0 means choose MODE 1 or MODE 2; inserting configurator 1 means choose MODE 3

LE: Configuration position for smart power supply management. Only valid when Type = 1. When Type = 0, no need to configurate this position.

TYP:
configuration position for power supply function
(√ means have this function, × means do not have this function).

TYP	POWER SUPPLY MANAGEMENT FUNCTION	SMART POWER FUNCTION
0	×	×
1	√	√
2	×	√

Power supply management :
In system having standby battery (OPTIONAL), when A/C is cut, IU will be informed to enter enery-saving mode to save energy for alarm function.
For system with alarm function and battery, is suggested to set power supply management function ON.

Smart power supply :
This allows connection of the maximum quantity of working Small EP when power is normally supplied. For those projects, we suggest to use Power supply as assistant power supply and keep smart power function ON. When Type = 0, no configuration is necessary.

ASR = ALARM SINKING RESERVE OF EACH APARTMENT SUPPLIED BY THE PS	
0	300 mA (Default Max)
1	0 mA
2	50 mA
3	85 mA
4	120 mA
5	150 mA
6	180 mA
7	210 mA
8	240 mA
9	270 mA

LE : configuration position for smart power supply function :
this position manage when to enter energy-saving mode under different situations.
0 Energy saving mode
1 NO Energy saving mode

NOTE : in energy saving mode,when entrance panel, small EP (SEP) or switchboard call the internal units, the relative monitor remain OFF. Internal unit can't monitoring the entrance panel and cannot perform Intercom functions.

One different device configuration way available :

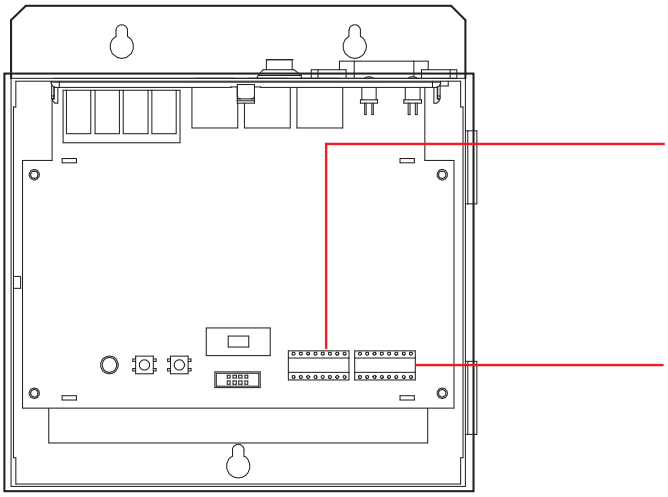
WAY 1) Configuration settings by inserting phisical configurators

Configuration

Configuration settings by inserting phisical configurators - WAY 1:

Physical connection for the configurators to their sockets

Example (A)



N	N	N	CF4	CF5	CF6	CF7
◎	◎	◎	◎	◎	◎	◎
N	N	N	FF min	FF min	#I	#I
◎	◎	◎	◎	◎	◎	◎
0	1	2	0	1		

CF8	CF9	CF10	CF11	TYP	ASR	M	LE
◎	◎	◎	◎	◎	◎	◎	◎
FF max	FF max			TYP	ASR	M	LE
◎	◎	◎	◎	◎	◎	◎	◎
0	2			1	0	0	0

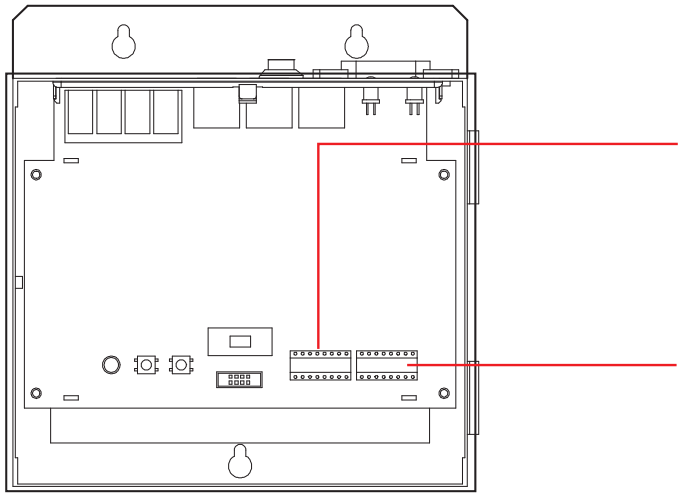
Example (A)

This riser has 20 floors, and each floor has 4 IUs. This power supply manages 1-2 floor. If need open smart power function and power management function, the power supply address is 12, max current of alarm sensor is 300 mA. System use MODE 1 configuration method. Power supply configuration should be as following:

POSITION	MODE 1	VALUE FOR CONFIGURATOR	REMARKS
CF1	N	0	
CF2	N	1	
CF3	N	2	
CF4	FF Min	0	
CF5	FF Min	1	
CF6	#II		Default is 4 apartments. 0 means 4 apartments0.
CF7	#II		
CF8	FF Max	0	
CF9	FF Max	2	
CF10	CF10		For mode 1 and mode 2, CF10 and CF11 do not apply
CF11	CF11		
CF12	Type	1	
CF13	ASR	0	
CF14	M	0	
CF15	LE	0	

Configuration

Example (B)



N	N	N	CF4	CF5	CF6	CF7
◎	◎	◎	◎	◎	◎	◎
N	N	N	FF min	FF min	#I	#I
◎	◎	◎	◎	◎	◎	◎
0	1	2	0	1	0	5

CF8	CF9	CF10	CF11	TYP	ASR	M	LE
◎	◎	◎	◎	◎	◎	◎	◎
FF max	FF max			TYP	ASR	M	LE
◎	◎	◎	◎	◎	◎	◎	◎
0	2			1	0	0	0

Example (B)

This riser has 20 floors, and each floor has 5 IUs. This power supply manages 1-2 floors. If need open smart power function and power management function, the power supply address is 12, max current of alarm sensor is 300 mA. System use MODE 2 configuration method. Power supply configuration should be as following :

POSITION	MODE 1	VALUE FOR CONFIGURATOR	REMARKS
CF1	N	0	
CF2	N	1	
CF3	N	2	
CF4	FF Min	0	
CF5	FF Min	1	
CF6	#II	0	
CF7	#II	5	
CF8	FF Max	0	
CF9	FF Max	2	
CF10	CF10		Here configuration is not necessary for mode 1 and mode 2
CF11	CF11		
CF12	Type	1	
CF13	ASR	0	
CF14	M	0	
CF15	LE	0	

Configuration

Choosing system power solution:

- **Solution 1**: PWS 323005 will be chosen as system power supply inside riser while auxiliary PWS (323010) will be chosen for all the assistant power supply.

- **Solution 2**: PWS 323005 will be chosen for both system power supply inside riser and assistant power supply.

Note: when the system has Small EP, solution 2 will be helpful to avoid possible damage to the power supply in the system. When the system has IU connected with Small EP, at some occasions, if several Small EPs call IU at the same time, it will make power supply overloaded.
Under this situation, the power supply is at risk to be damaged.

Suggested power supply solution and related configuration:

NO.	SYSTEM		PWS SOLUTION	CONFIGURATION WHEN PWS IS SYSTEM POWER SUPPLY (IMPEDANCE SWITCH OF PWS MUST BE ON)						CONFIGURATION OF PWS AND AUXILIARY PWS WHEN PWS IS AUXILIARY POWER SUPPLY (IMPEDANCE SWITCH OF POWER SUPPLY MUST BE OFF)					
	ALARM	SMALL EP		CF1 ~ CF3 (NNN)	CF4 ~ CF11	CF12 (TYPE)	CF13 (ASR)	CF14 (M)	CF15 (LE)	CF1 ~ CF3 (NNN)	CF4 ~ CF11	CF12 (TYPE)	CF13 (ASR)	CF14 (M)	CF15 (LE)
1	No	No	1	X	X	X	X	X	X	Here use Auxiliary Power supply, configuration is not necessary.					
2	No	No	1	X	X	X	X	X	X						
3	Yes	No	1	X	X	X	X	X	X						
4	Yes	No	1	NNN	X	1	0.2–9	1	X						
5	No	Yes	2	NNN	√	1	1	0/1	X	X	√	2	1	0/1	X
6	No	Yes	2	NNN	√	1	1	0/1	X	X	√	2	1	0/1	X
7	Yes	Yes	2	NNN	√	1	0.2~9	0/1	X	X	√	2	0.2–9	0/1	X
8	Yes	Yes	2	NNN	√	1	0.2~9	0/1	X	X	√	2	0.2–9	0/1	X

Note: X = means no need any configurator, it also means the configurating position is 0; others need configurator with requested value. √ = means need configuration here.