bticino

MY HOME

Multimedia wiring

TECHNICAL GUIDE 06

BTicino answers

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CONTENTS

Numeric index 2

MY HOME 3

General features 4

The possible functions 8

MY HOME WEB 10

GENERAL FEATURES 14

Catalogue 22

General rules for installation 25

Wiring diagrams 31

Technical features 40

Numeric index

Item	Catalogue page	Configuration page	Techn. features page
3499	24		
C9455	23		49
E48	24		49
E48A1	24		
E48A2	24		
F441	24		47
F442	23		43
F443	23		40
F444	23		46
F445	24		
F400A	24		
L4202D	22		45
L4210D	22		45
L4269F	22		
L4270	22		
L4270P	22		
L4668BUS/35	24		
L4668BUS/60	24		
L4668CM	24		
L4668D/30	24		
L4668D/60	24		
L4668T/30	24		
L4668T/60	24		
L4668TV/30	24		
L4668TV/60	24		
N4202D	22		45
N4210D	22		45
N4269F	22		
N4270	22		
N4270P	22		
NT4202D	22		45
NT4210D	22		45
NT4269F	22		
NT4270	22		
NT4270P	22		
S2133	23		
S2157	23		

MY HOME GENERAL FEATURES

MY HOME
The home as you want it

MY HOME is a home automation system which offers state-of-the-art solutions, which are in increasing demand in the home and in the service sector.
It offers all the house-automation functions and applications concerning comfort, safety, energy saving, communication and control.

A common feature of all the MY HOME devices is that they use the same system technology, based on the digital bus, so that the various system components can be combined as the customer chooses and requires.

MY HOME

MY HOME WEB
- Services to control and manage the home at a distance

MOBILE PHONE

FIXED-LINE TELEPHONE

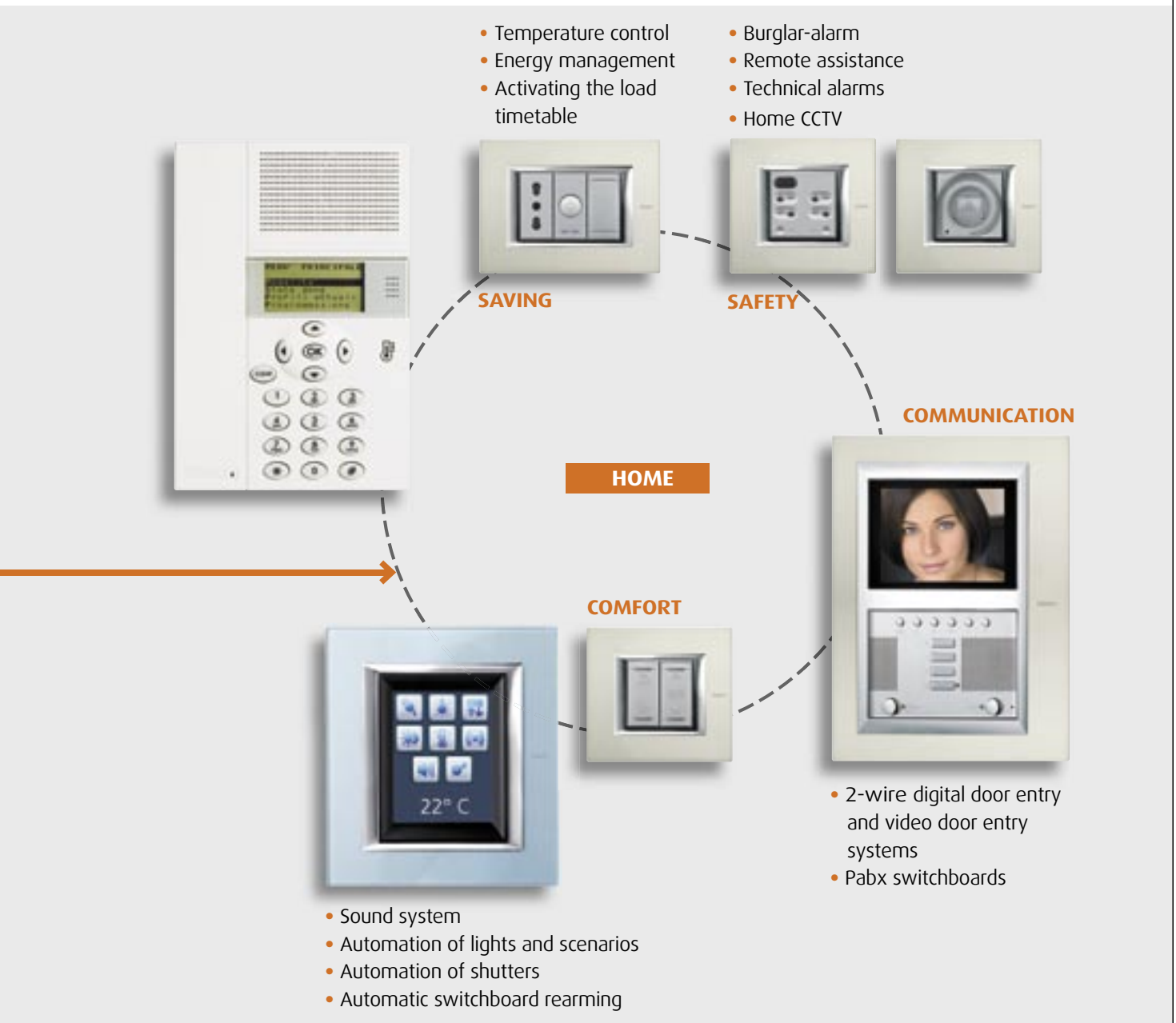
PERSONAL COMPUTER

HAND-HELD COMPUTER

CONTROL
- Web server (audio/video and GSM)
- Burglar-alarm control unit with Dialling device
- Telephone switchboard
- GSM

The installation modularity and functional integration of the various devices also allows optimisation of costs, as the user can select which applications he wants to adopt now and which he will choose in the future.

MYHOME can, moreover, communicate with the outside world by means of special devices which interact with the home through fixed-line telephones and mobile phones and/or any Personal Computer via local network or Internet.



MY HOME
The home as you want it

Today, the MY HOME system is also available in AXOLUTE styles and can cover all the domotic solutions associated with comfort, security, saving, communication and control. Furthermore, with AXOLUTE, advanced devices such as the colour Touch Screen, the Videodisplay and the Videostation, add images to the control, thus providing the user with a simpler and more intuitive interface. The Bus technology and the configuration of the products have not changed and are common to all systems achieved so far with the LIVING, LIGHT and LIGHT TECH styles.

Totally free to choose the control

MY HOME brings you the maximum choice in selecting the control, thus enabling you to manage your own domotic system; from simple controls to controls for rooms, scenarios and local and remote monitoring.

BASIC CONTROL

Enabling and adjusting a single function with:

- standard controls
- infrared controls
- touch controls

ROOM CONTROL

Colour Touch Screen:

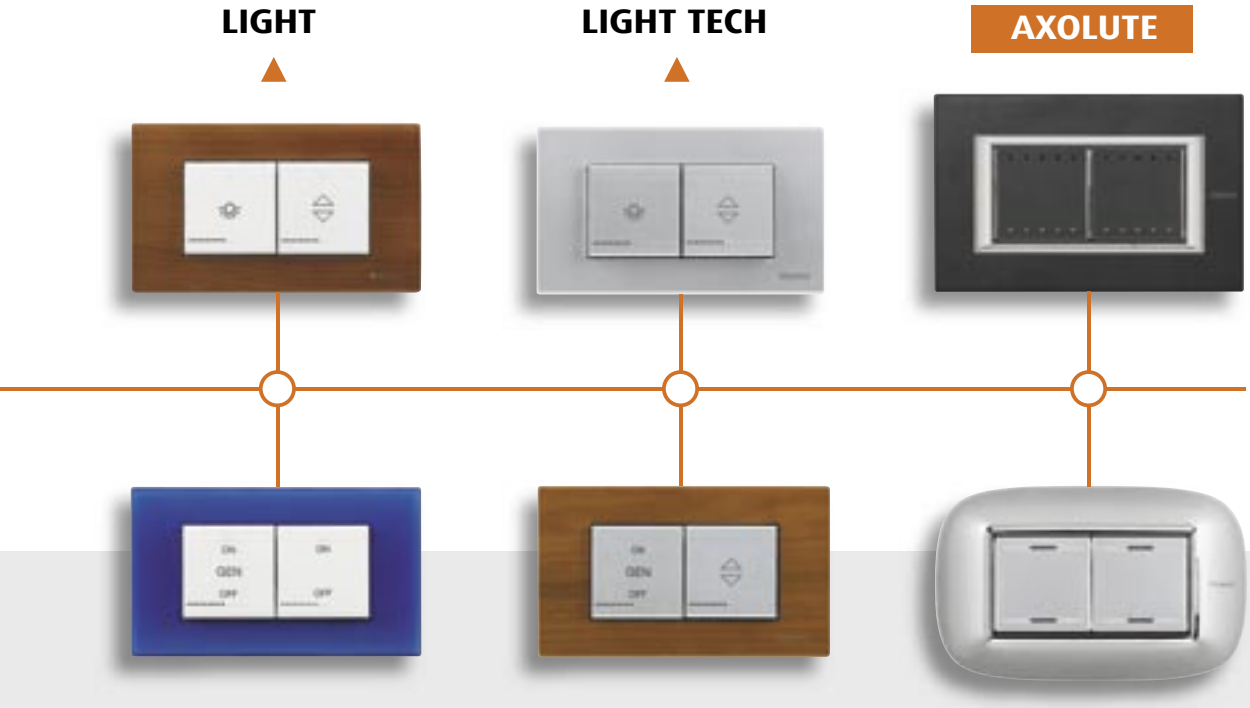
- customizable icons
- control of all functions of a single room


Standard control


Touch control


Infrared control with Burglar alarm detector Colour Touch Screen

Colour Touch Screen



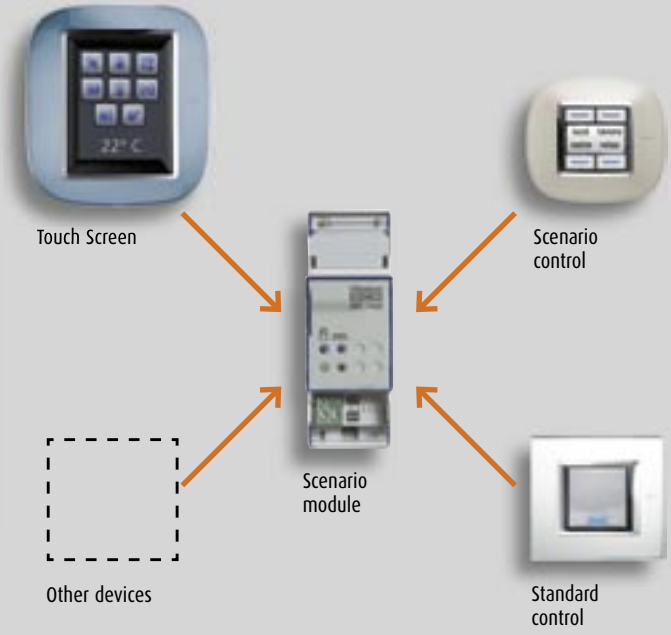
MONITORING CONTROL

- control of all system functions
- many customization possibilities
- simple and intuitive interface thanks to the use of sounds and images via the VIDEO STATION and VIDEO DISPLAY

VIDEO DISPLAY VIDEO STATION

SCENARIO CONTROL

The scenarios, complete with all the MY HOME functions, are stored in the scenario module and can be selected from different devices, depending on the user's needs.



The possible functions

SAFETY

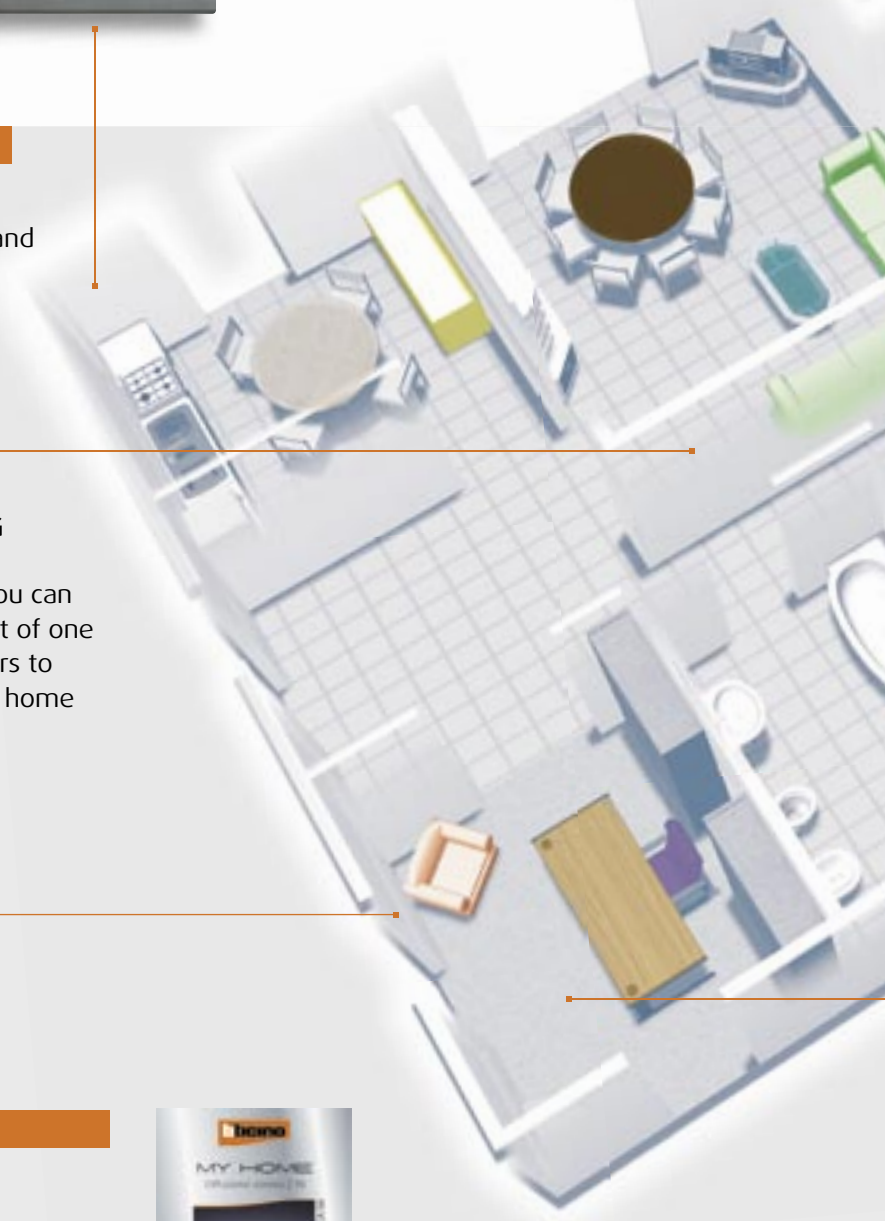
BURGLAR-ALARM CONTROL UNIT
You can monitor the whole house or just one particular room.

GAS-STOP DETECTOR
Just a small leak and the solenoid valve stops the gas escaping.

COMFORT - AUTOMATION

TOUCHSCREEN
Just one room command for several MY HOME functions.

MOTORISED ROLLING SHUTTERS
When you wake up you can control the movement of one or more rolling shutters to give more light in the home effortlessly.



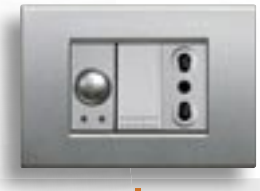
COMFORT - SOUND SYSTEM

SOUND SYSTEM AMPLIFIER
With a simple movement you can switch the radio on from anywhere in the home and listen to your favourite programme.

SAVING - TEMPERATURE CONTROL

TEMPERATURE PROBE
You can set different temperatures for each room and for every hour of the day. With savings up to 30%.

SAVING - ENERGY MANAGEMENT



SOCKET WITH ACTUATOR
To disconnect the less important loads and avoid a blackout because of an overload.

COMMUNICATION

MINIATURISED CAMERAS
A friendly eye in each room lets you check the whole house.

TELEPHONE WITH VIDEO SECTION
In each device you will find all the communication you need with the interphone, video door entry and telephone functions.

CONTROL

WEB SERVER
By means of the computer you can control and activate your home even when you are away.

MY HOME WEB

My Home Web is the complete range of services which allow the user to manage and control remotely all the My Home functions of the home at any time and with different means of communication, such as a computer connected to the Internet, a hand-held computer or a telephone (fixed or mobile).

WHAT MY HOME WEB CAN DO

The following functions can be activated with a simple telephone or by connecting to the reserved area of the Internet MY HOME portal:

Controls: to manage the lighting, heating, electrical appliances, power and all the automatic devices in the home.

Scenarios: to simultaneously activate several predefined commands such as, for example, opening the gate and switching on the driveway lights at the same time, with just one action. A scenario saved in the system can be activated by means of a scenario unit and Web house-automation scenarios. The Web house-automation scenarios are scenarios programmed in the Web pages of the MY HOME portal.

Alarms: when there is a dangerous event, the house contacts the telephone numbers and programmed addresses with a telephone call, an SMS and an e-mail with audio/video attached and automatically activates by responding to the preset actions (e.g. the automatic switching on of all the lights in the home).

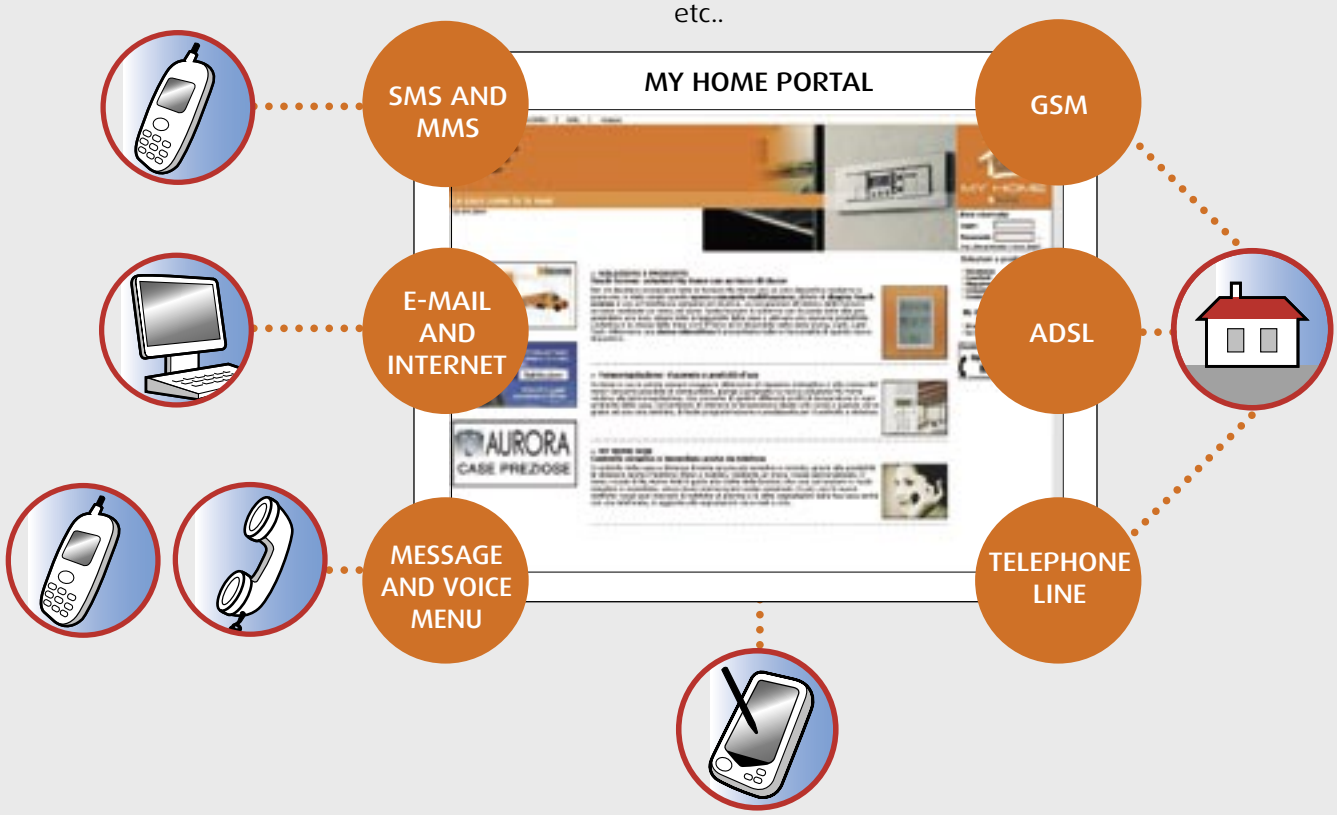
Planning: with a single order one can manage the watering or temperature control or simulate the presence of the user in the home. It will be possible to determine the actions that the house shall automatically perform during the days, hours and for the time periods chosen.

Archives: MY HOME Web records all the actions and events which have occurred in the home and makes them available for consultation by the user.

Images: to see the rooms of the house taken by the cameras in real time.

Answering machine: an event such as a door-entry call can be notified to the user by sending SMS or e-mail messages with an audio/video attachment. The signal can also be consulted by entering the reserved area of the My Home portal.

Check: the state of the home functions can be managed to find out, for example, whether the intrusion system is switched on, the lights are on etc..



MY HOME WEB
The advantages

MY HOME WEB can check all the house-automation functions simply, customisable and conveniently. Simple because the user does not have to remember special passwords to access the service via telephone or computer. Customisable because the user can arrange schedules, WEB domotic scenarios as well as the answering machine introduction message. Convenient because thanks to the MY HOME Portal the services can be used with different means of communication such as a computer and fixed and mobile phones, regardless of the type of device used.

Devices such as the telephone actuator, the burglar alarm unit with an integrated dialling device and the telephone dialling device specifically designed for being managed via the telephone line can also be, with MY HOME WEB, controlled with a PC connected to the Internet or with voice commands and SMS's. The MY HOME Web installer can benefit from the advantages offered because, when the customer requests, he can modify the programming, the system parameters and make diagnosis and maintenance remotely.

EXAMPLE OF WEB PAGE TO CONTROL THE CAMERAS

MY HOME MULTIMEDIA WIRING

THE NEWS

New power supply unit which can be combined with an accessory module to supply several MY HOME applications

SECTION CONTENTS

General features

14 Why choose multimedia wiring in the home?

16 The advantages of multimedia wiring

18 The star centre

19 Three connectors in a single module: the multifunction connector

20 All the services are available with just 2 wires

Catalogue

22 Connectors

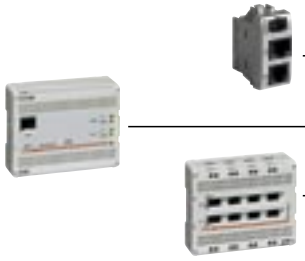
23 Active devices

24 Audio/video node and various accessories

25 General rules for installation

31 Wiring diagrams

40 Technical features



Why choose multimedia wiring in the home?

TV, DATA, TELEPHONE AND VIDEO DOOR ENTRY SYSTEM:
available in every room of the home

PUT THE TV WHERE YOU WANT: THERE'S A JACK!

- you can put the television anywhere you like
- the house is already set up for terrestrial digital television

PUT THE TELEPHONE WHERE YOU WANT: THERE'S A JACK!

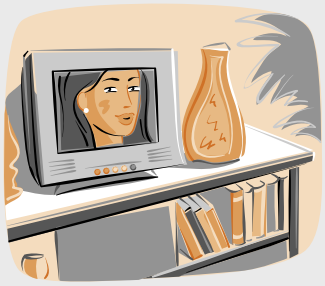
- several people can use the telephone at the same time
- you can connect the telephone anywhere you like
- the house is already set up for interactive digital TV

CHOOSE WHERE TO SURF IN INTERNET

- surf at the same time with just one contract and with the telephone line free
- manage a domestic data network to share a single printer

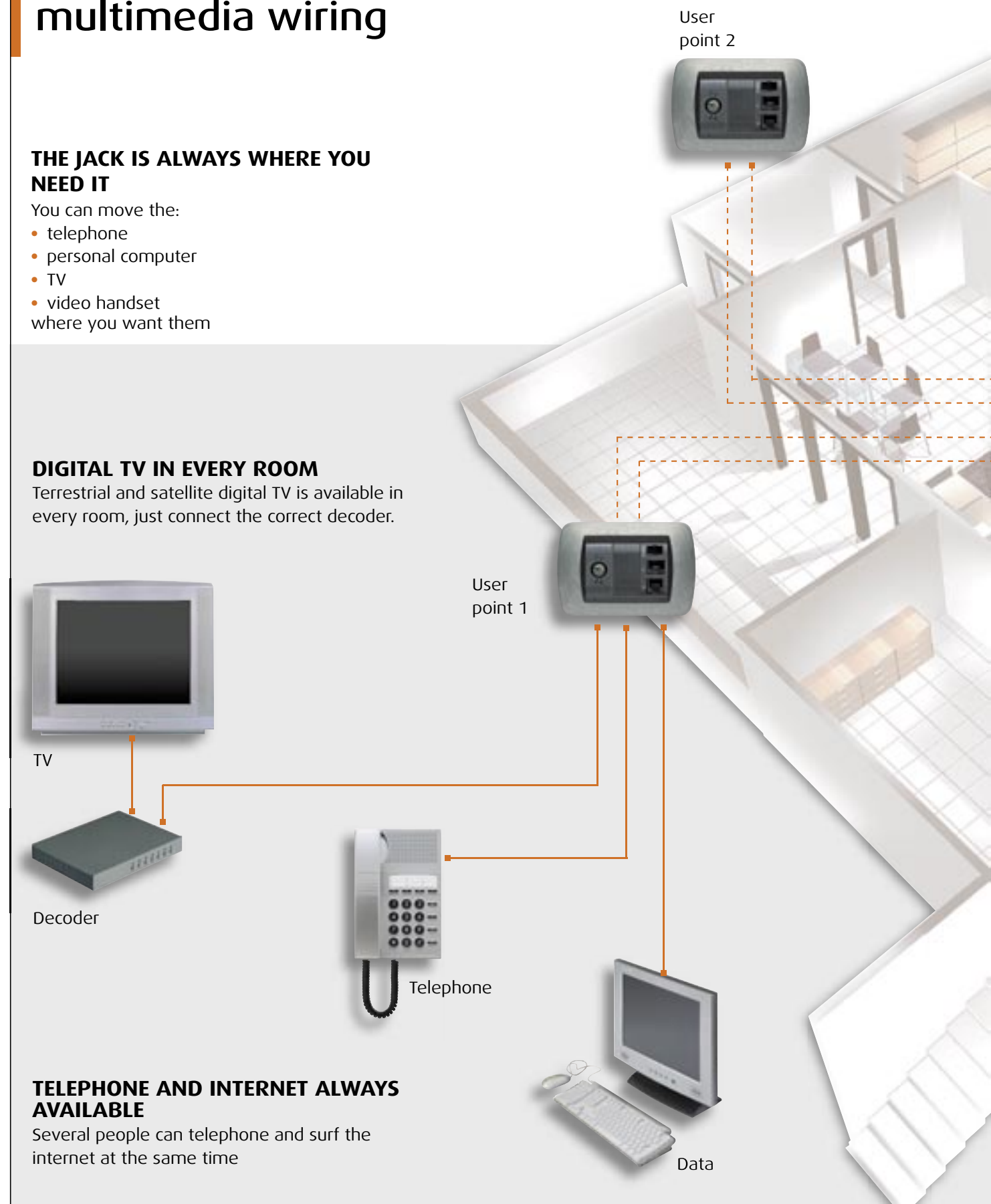
YOUR HOUSE IS ALREADY SET UP FOR MY HOME APPLICATIONS

- you can move the video handset where you want it
- you can see who is at the door directly from the home television
- there is music in every room



MY HOME

The advantages of multimedia wiring



THE JACK IS ALWAYS WHERE YOU NEED IT

You can move the:

- telephone
- personal computer
- TV
- video handset

where you want them

DIGITAL TV IN EVERY ROOM

Terrestrial and satellite digital TV is available in every room, just connect the correct decoder.

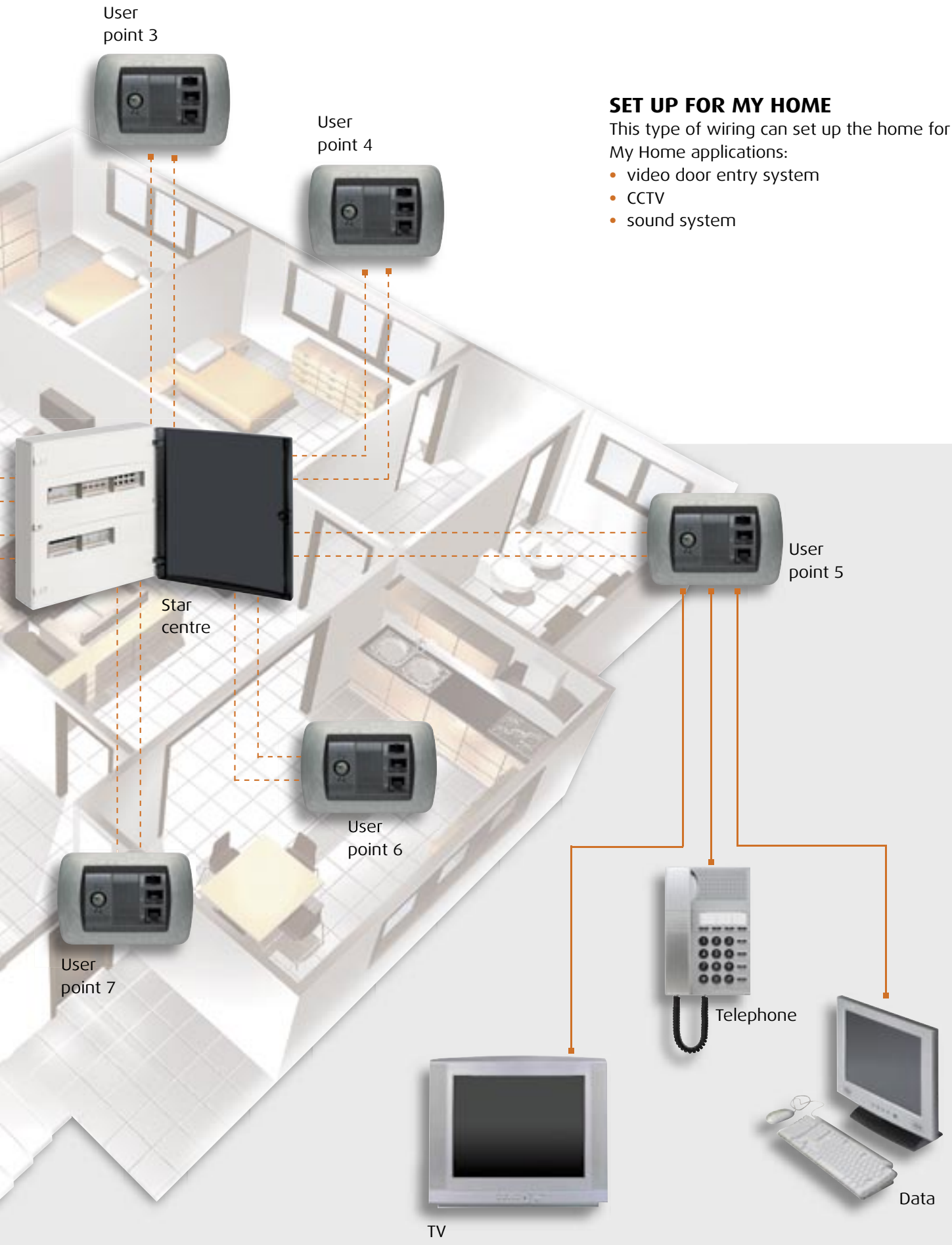
TELEPHONE AND INTERNET ALWAYS AVAILABLE

Several people can telephone and surf the internet at the same time

SET UP FOR MY HOME

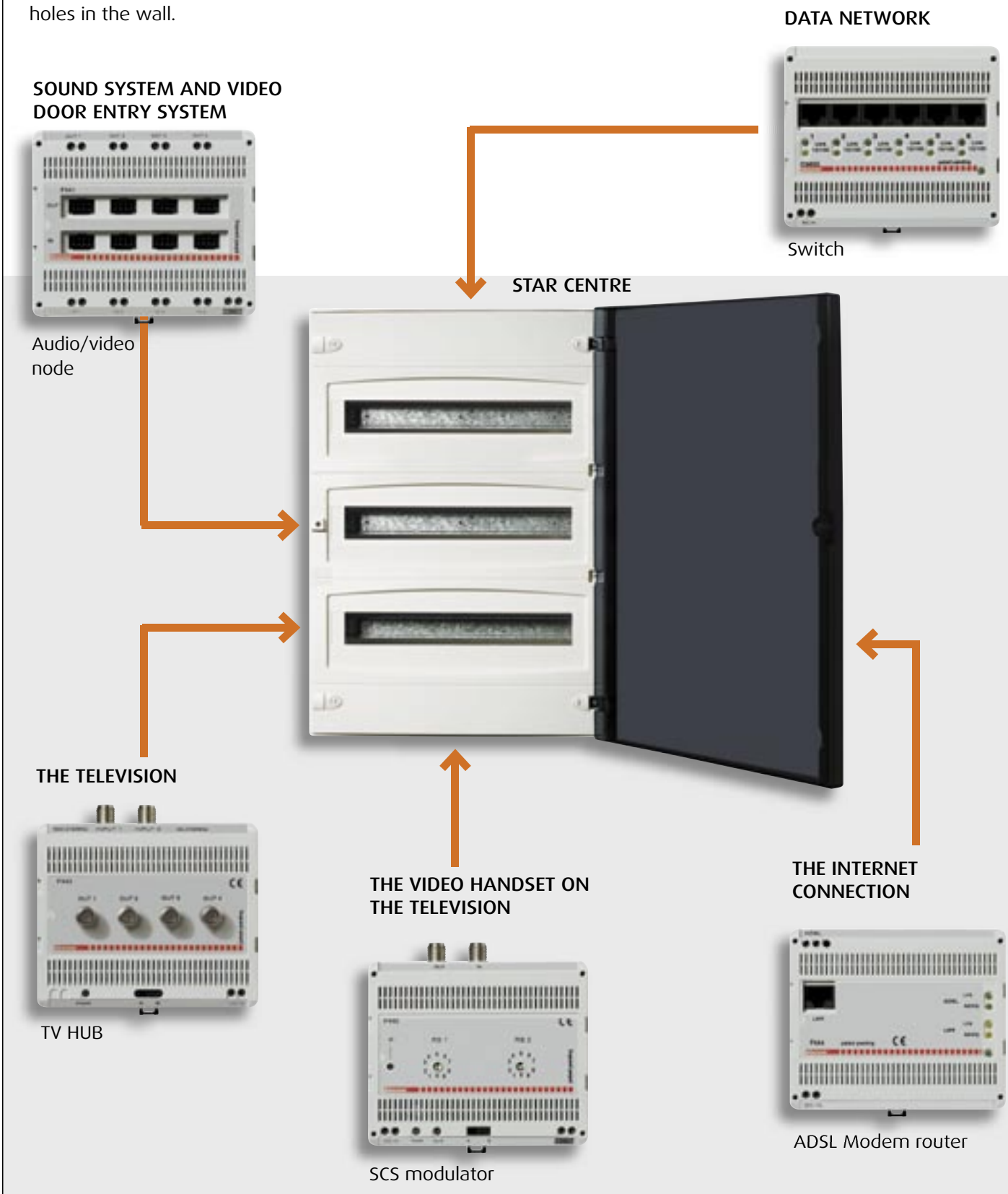
This type of wiring can set up the home for My Home applications:

- video door entry system
- CCTV
- sound system



The star centre

To add a function just add an object in the unit. There is no need to make holes in the wall.



Three connectors in a single module: the multifunction connector

BUS connector – to connect MY HOME devices

BUS

DATA

TELEPHONE

THE MULTIFUNCTION CONNECTOR:
three simultaneous services in the same user jack

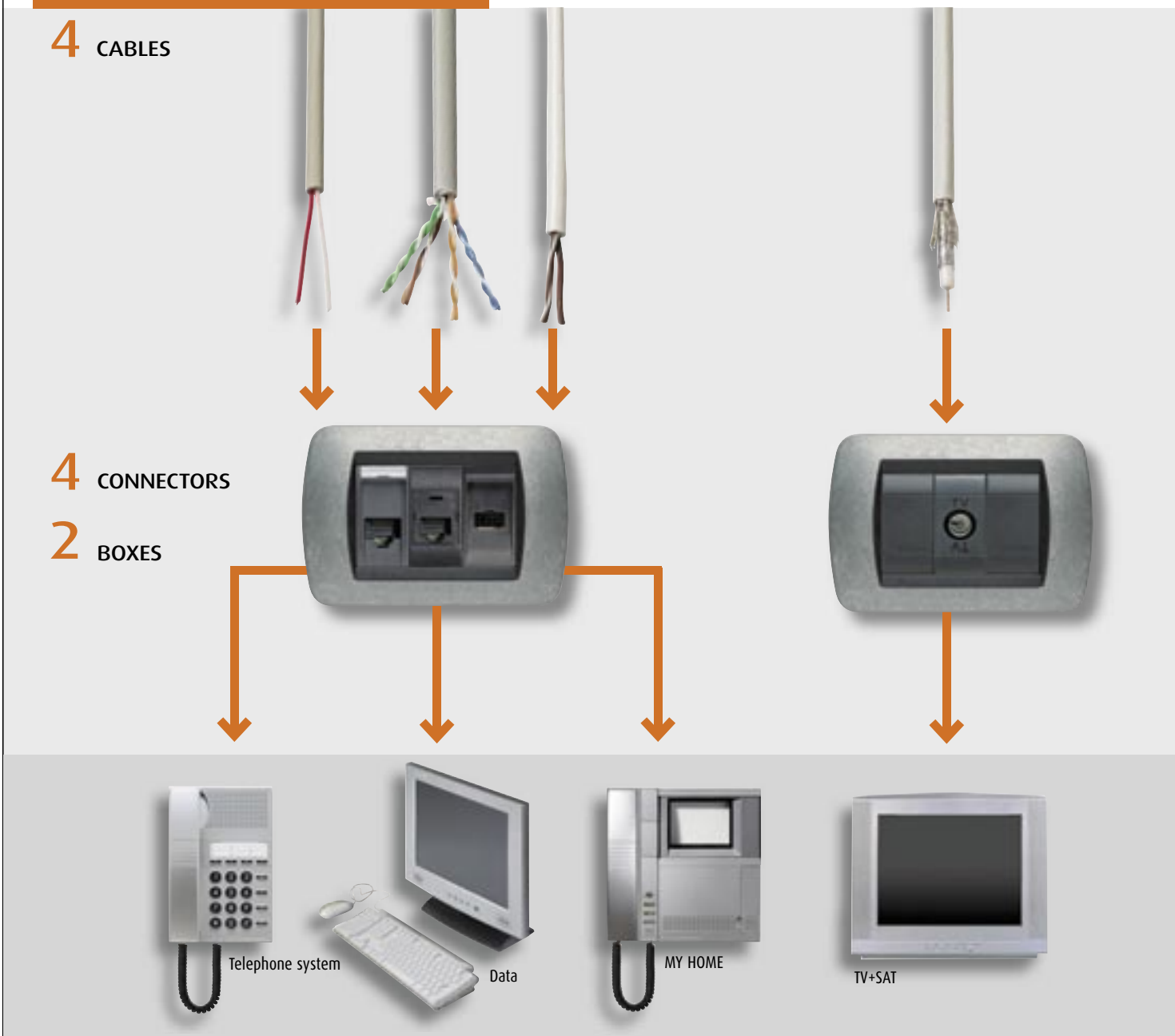
RJ45 – to connect the Personal Computer

RJ11 – to connect the telephone

All the services are available with just 2 wires

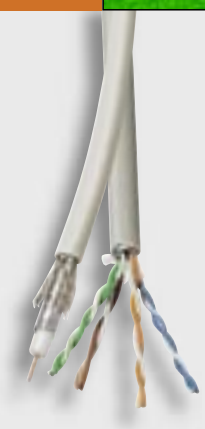
All the services already present in the home can be distributed, with the other latest-generation services such as digital television and Internet, with just two wires which run in the same piping. The telephone and data services and the My Home applications are distributed over a category 5 4-pair cable and the satellite and terrestrial TV are distributed over an RG6 coaxial cable.

TRADITIONAL WIRING



MULTIMEDIA WIRING

2 CABLES



2 CONNECTORS

1 BOX

TV+SAT

Telephone system

Data

My Home

Connectors


L4270


N4270


NT4270

MULTIFUNCTION CONNECTOR

Item	Description
L4270 **N4270** **NT4270**	Multifunction connector with RJ11, RJ45 and combined 2 wire BUS connector. 110IDC heading of the cat. 5 4-pair (22 – 26 AWG) UTP cable. Telephone, PC, automation and 2 wire door entry system connection. Width 1 module.


L4270P


N4270P


NT4270P

MULTIFUNCTION CONNECTOR + SPLITTER

Item	Description
L4270P **N4270P** **NT4270P**	Multifunction connector with RJ11, RJ45 and combined 2 wire BUS connector. 110IDC heading of the cat. 5 4-pair (22 – 26 AWG) UTP cable with insulation cutter. Telephone, PC, automation, door entry and 2 wire video door entry system connection. Width 2 modules. Separate rear in/out connection for 2 wire BUS for automation and video door entry system/CCTV and sound system.

L4202D

N4202D

NT4202D

SHIELDED TV + SAT CONNECTOR IN DIE-CAST CONTAINER

Item	Description
L4202D **N4202D** **NT4202D**	straight (shunted) coaxial jack for single-user aerial systems, also remotely supplied, centralised and single-user, centralised systems via satellite with feed-through of current and signal to select the channels – shielded connection terminals with unlosable screws – Ø 9.5 mm – male connector – 1 module


L4269F


N4269F


NT4269F

TYPE F TV CONNECTOR

Item	Description
L4269F **N4269F** **NT4269F**	type F TV coaxial connector – impedance 75Ω - screw coupling

L4210D

N4210D

NT4210D

TV + RD + SAT JACK CONNECTOR

Item	Description
L4210D **N4210D** **NT4210D**	straight (shunted) coaxial jack for single-user aerial systems, also remotely supplied, centralised shunted single-user and centralised systems via satellite shunted with feed-through of current and signal to select the channels and radio systems – male TV connector Ø 9.5 mm – female SAT and radio connector Ø 9.5 mm – for installation in rectangular box item 503E, item 504E and item 506L

Active devices

S2133

S2157

TV PLUGS AND JACKS

Item	Description
S2133	wander TV plugs and jacks - Ø 9.5 mm – white – for TV + SAT jacks and L/N/NT4206D
S2157	mixer/demixer for TV + SAT systems with 3 connectors

F444

ADSL MODEM ROUTER

Item	Description
F444	ADSL router modem set up with 1 RJ45 port for installation on a DIN 35 rail. Power supply 10 – 35 Vd.c. width 6 DIN 35 modules

C9455

SWITCH 10/100MBIT/S

Item	Description
C9455	Switch for installation on a DIN 35 rail set up with 6 RJ45 ports, automatic detection of the 10/100Mbit/s operating speed, can connect up to 5 PC. Power supply 10–35 Vd.c. width 6 DIN 35 modules

F443

TV HUB

Item	Description
F443	TV Hub can be installed on a DIN 35 rail to distribute the terrestrial and satellite television signal to shunted TV jacks. Power supply 10 – 35 Vd.c. width 6 DIN 35 modules. Has two type F input connectors for TV and SAT aerial and 4 type F outputs.

F442

SCS MODULATOR

Item	Description
F442	modulator to display the 2 wire video door entry system call from an entrance panel directly on the TV. Installation together with TV HUB. Power supply 10 – 35 Vd.c. width 6 DIN 35 modules. Has one type F input connector for the aerial and one (type F) output for the television and a two-terminal connector for 2 wire BUS.

Audio/video node and various accessories

F441

AUDIO/VIDEO NODE AND AUTOMATION NODE

Item	Description
F441	modular device for DIN35 rail with 4 input terminals and 4 output terminals and with 2 wire BUS cross connectors to manage 4 two wire video door system entrance panels. Power supply 18 – 27 Vd.c. width 6 DIN 35 modules.
F445	modular device for DIN35 rail with 2 wire BUS cross connectors to manage automation and temperature control systems. - Power supply 18 – 27 Vd.c. width 6 DIN 35 modules.

E48

E48A1
E48A2

POWER SUPPLY

Item	Description
E48	power supply for MY HOME applications – input 110-230V a.c., output 29/35V c.c. – maximum current supplied 1.2A - absorbed power 131VA cos· 0.99 – width 10 DIN modules. For applications with integration of other MY HOME systems - use accessory modules Item E48A1 and Item E48A2.
E48A1	Accessory module for power supply 27V d.c. 1.2A power to the Burglar alarm, Automation and Temperature control systems – possible to connect 12V 7.2-24Ah back-up battery – Size: 4 DIN modules – Pd=7W
E48A2	Accessory module for supplying 27V d.c. 1.2A power to the Burglar alarm, Automation, Temperature control and 2 wire Video Door Entry systems - possible to connect 12V 7.2-24Ah back-up battery – Size: 4 DIN modules – Pd=4.6W

L4668D/60

L4668TV/60

L4668BUS/35

PATCH CORDS

Item	Type	Length (cm)
L4668D/30	RJ45-RJ45	30
L4668D/60	RJ45-RJ45	60
L4668T/30	RJ11-RJ11	30
L4668T/60	RJ11-RJ11	60
L4668TV/30	TV-TV	30
L4668TV/60	TV-TV	60
L4668BUS/35	BUS-BUS	35
L4668BUS/60	BUS-BUS	60

3499

L4668CM

VARIOUS ACCESSORIES

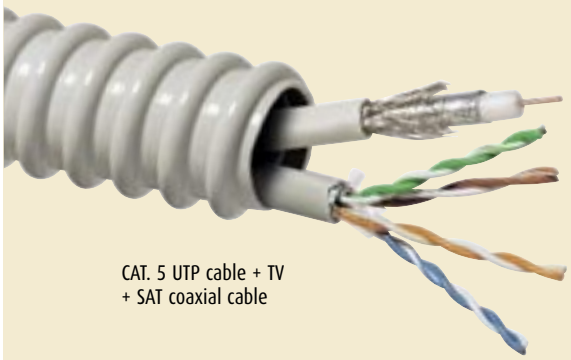
Item	Description
F400A	multifunction adaptor for 3 connectors
L4668CM	unshielded 4-pair UTP cable category 5 length 305m
3499	line terminator

F400A

GENERAL RULES FOR INSTALLATION
Layout of the user points

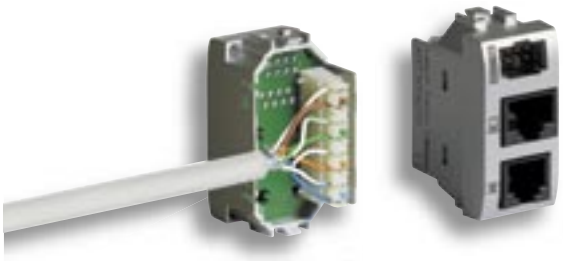
A multifunction connector must be installed at each user point in the home. A TV+SAT jack can also be installed in the same point to manage the television signal.
Set up the user point near a 230Va.c. power socket to supply the various users (Personal Computer, printer, TV, VCR, ...)

- Do not position the multifunction connection and the power sockets in the same small box.
- To guarantee flexibility of management of the domestic network there should be at least one user point for each room.
- The number of points per room must be such that from each zone the user point can be reached with a PC or telephone connection cord which is not more than 5 metres long, without however hindering passage in the room.



CAT. 5 UTP cable + TV
+ SAT coaxial cable

Multifunction connector and feed-through TV connector



MULTIFUNCTION CONNECTOR

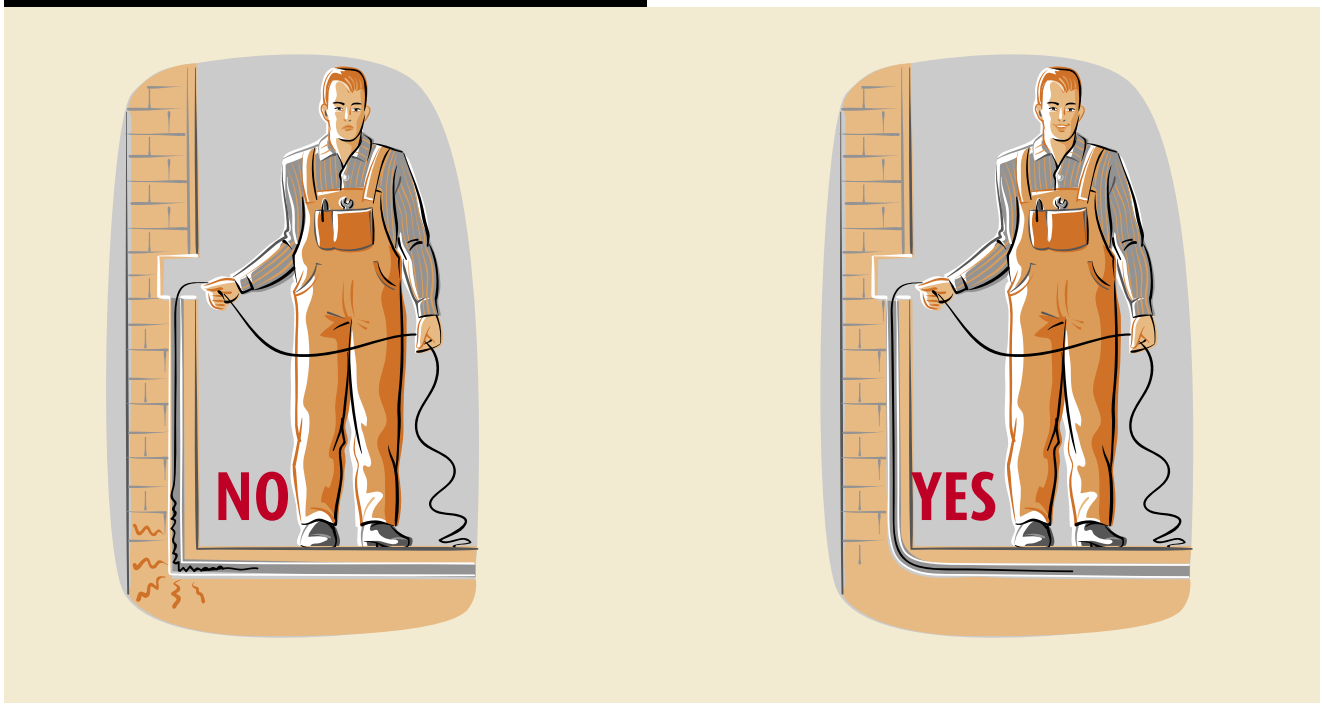
The multifunction connector can distribute three services simultaneously using just one category 5 UTP 4-pair cable. The main advantages of this type of socket are:

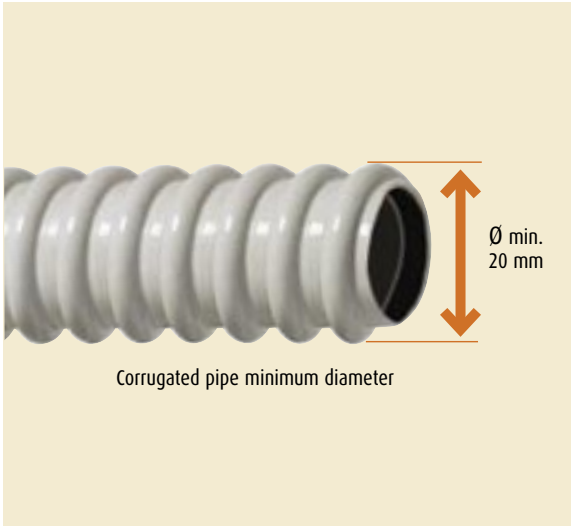
- smaller modularity for 3 functions (telephone+data+bus)
- space saving for same number of services in 503 boxes
- simple connection with just one UTP cable for 3 simultaneous connections

GENERAL RULES FOR INSTALLATION
Layout of the conduits

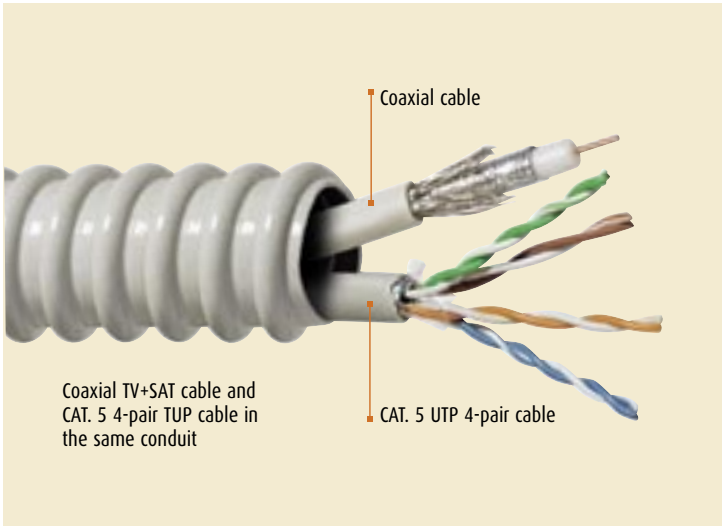
- A conduit with diameter not less than 18mm (recommended value 20mm) must be led to each of the user points distributed in the home.
- The TV cable and the category 5 4-pair UTP cable must be laid in this conduit.
- One end of each pipe/trunking provided must end at a user point and the other at the star centre. PVC piping or trunking can be used for horizontal distribution in the home.
- If the conduits must change direction when they are laid the maximum cable radii of curvature recommended by the producer must be respected. The minimum radius of curvature must not be less than 4 times the cable diameter.

DO NOT MAKE CURVES TOO TIGHT

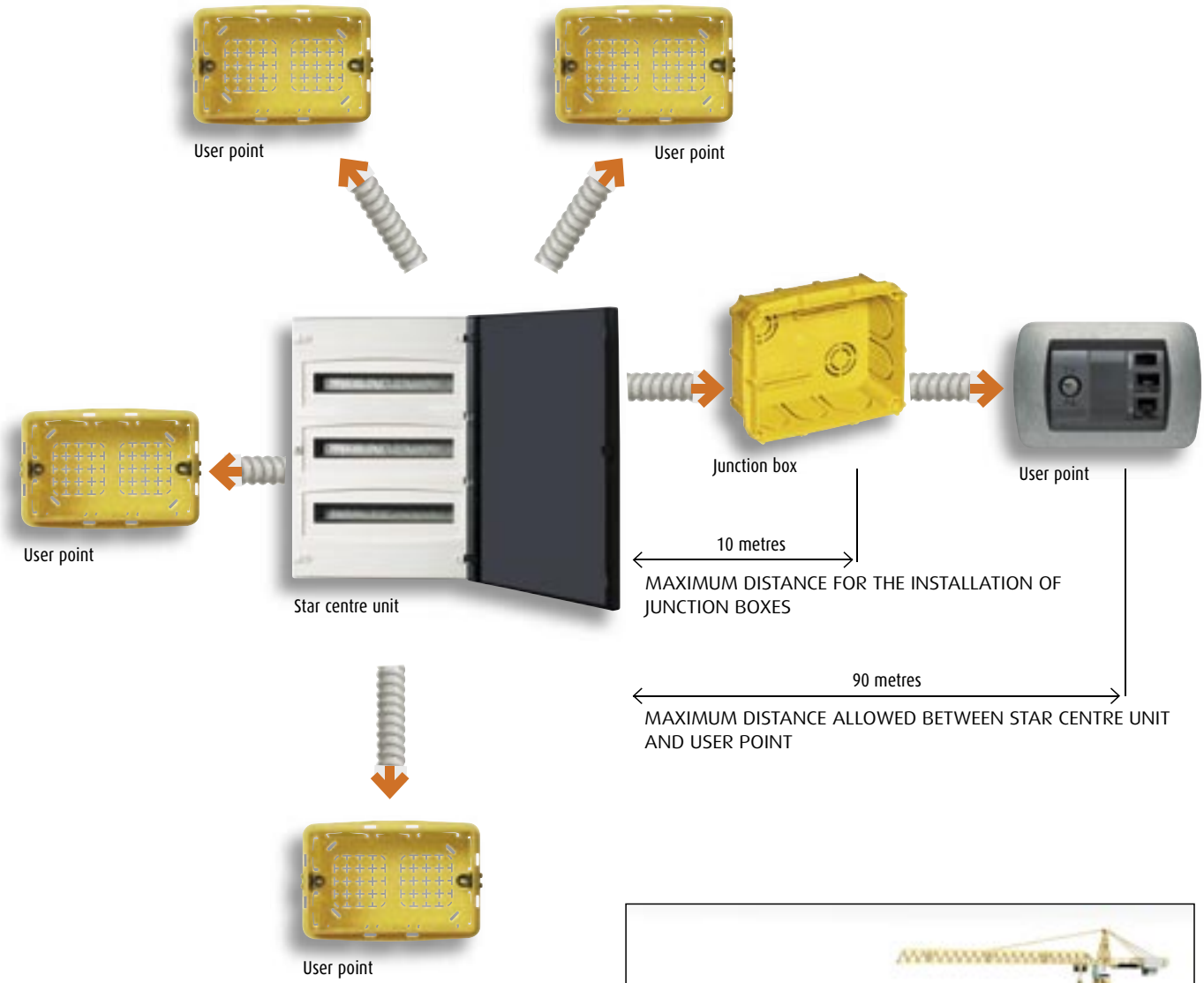




Corrugated pipe minimum diameter



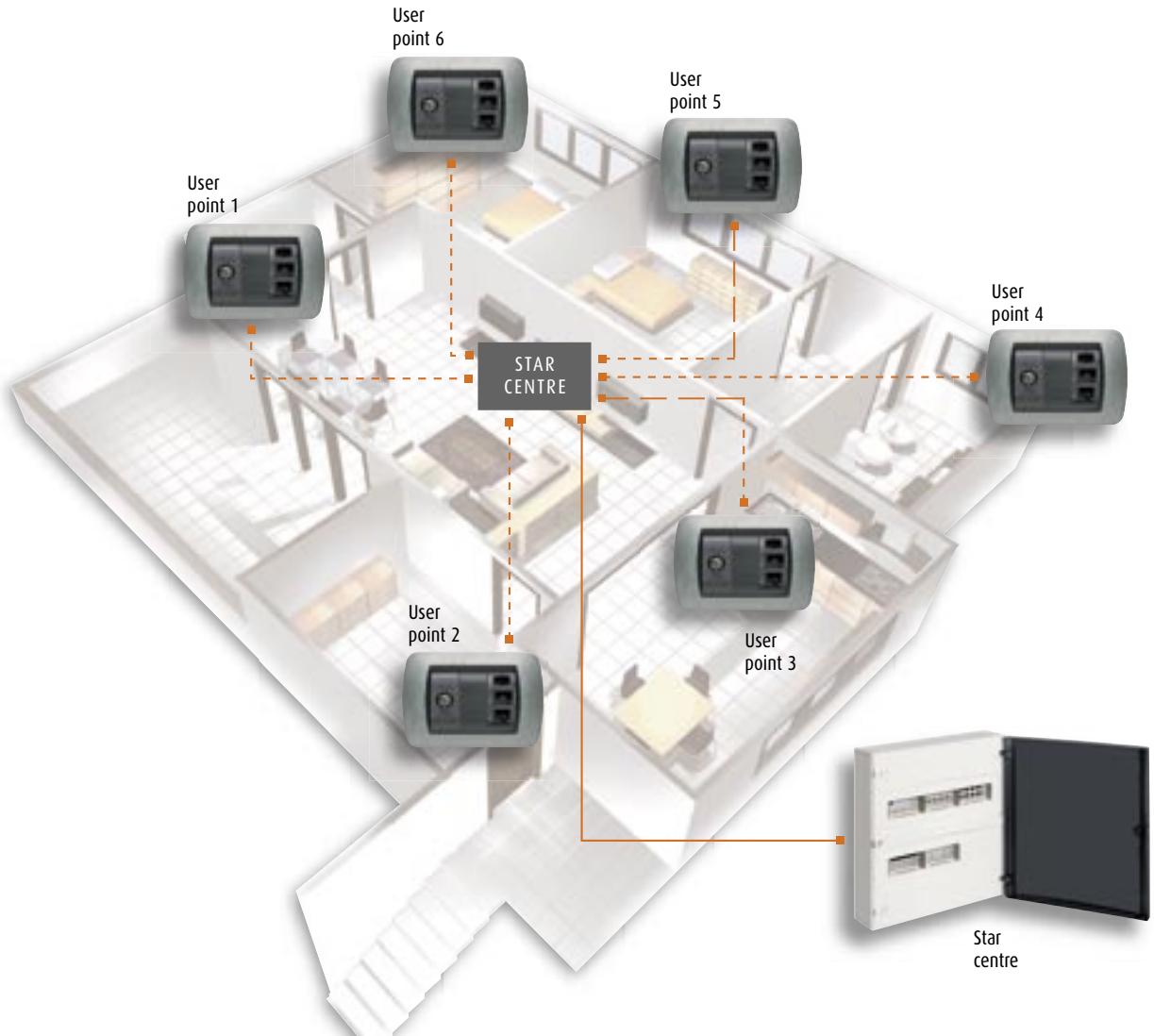
- The maximum length between each user point and the star centre must not be more than 90 metres.
- In each case guide IEC 306-2 recommends to preset every 10 metres a handling box or junction box to pull the cables.
- Compatible with the type of room where the conduits are being installed try to make the route as linear as possible.
- Keep a suitable distance between the power conductors and the multimedia cabling conductors holding the category 5 cables and the TV coaxial cables.



GENERAL RULES FOR INSTALLATION
Layout of the star centre

- The star centre must be a unit or a flush or wall-mounted board which is large enough to contain the active and passive devices needed to manage the services installed. It must be large enough to take any future expansions without needing to make holes in the wall to replace it.
- In the design phase check how many DIN35 modules would be occupied by the various devices and calculate at least 20 – 30% more free modules for any future developments.
- The star centre must be centrally positioned in the system, compatible with the layout of the rooms. In every case the star centre should be put in a hidden or invisible position so that it does not spoil the appearance of the home. One possible solution (always compatibly with the home) could be to locate the star centre in a bathroom or a cupboard.
- When choosing where to position the star centre also remember that the maximum connection distance between the user points and the star centre must not exceed 90 metres as laid down by guide IEC 306-2.
- All the trunking of the user sockets and the TV jacks must reach the star centre. There must also be a conduit with diameter not less than 38mm, for the entry of the services to the home.
- When power supplies are used they must be installed in the lowest position in the board to aid any dissipation of heat.
- Check that the sum of the powers dissipated by the devices is not greater than the maximum which the unit can dissipate. If it is choose a larger unit. The power supply must be chosen so that its maximum current value is greater than or the same as the sum of the currents absorbed by the active and passive devices installed. For each multifunction connector and TV + SAT jack in the home install one in the star centre to manage the cross-connections.

EXAMPLE OF STAR TOPOLOGY TO DISTRIBUTE SERVICES IN THE HOME



GENERAL RULES FOR INSTALLATION
Sizing the star centre

EXAMPLE OF 72 DIN 35 MODULE UNIT

- Each room must have at least 1 multifunction connector unless the user connection distance is not greater than 5 metres, or it could obstruct the entry to the room. In this case possibly provide more user points.
- To size the star centre calculate the maximum number of DIN 35 modules occupied by all the devices to be installed.
- Choose the correct unit/board remembering to reserve 20 – 30% extra DIN 35 modules for any system expansions.
- Check the consistency between the DIN modules effectively occupied by the devices and those available for each row of the unit/board.
- If possible position the unit/board centrally in the apartment or in any case in a position such that the maximum distance from the user points is not greater than 90 metres.
- Any power supplies are positioned low down.
- The multifunction connector uses the connection of a single CAT. 5 UPT cable to distribute the telephone system, data and SCS services.

Legend

1	=	adapter 3 multifunction connector
2	=	adapter 3 type F TV jacks
3	=	adapter 3 TELEPHONE jacks
4	=	switch
5	=	power supply
6	=	disconnector
7	=	TV HUB
8	=	Modem / Router

GENERAL RULES FOR INSTALLATION
Rules for installing the wires

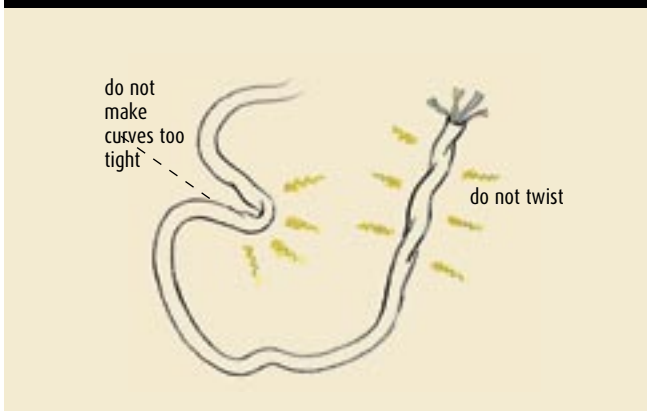
For each user point at least two cables, one category 5 UTP 4-pair and one coaxial for the TV, must be led from the star centre. Some basic rules must be respected when laying the cables so that the functionality of the wiring is not affected in the final inspection phase. These rules are given below.

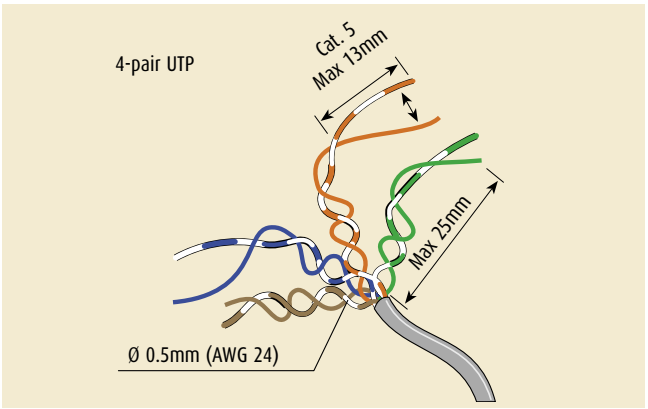
- Do not twist the UTP cable on itself to avoid altering the cable geometry, causing the pairs to separate.
- Do not apply excessive force when pulling the cables. The maximum force applied must not be greater than 11 kg. This can be respected by using one person at each end of the section.
- Remove the mechanical stresses, such as those caused by sections of suspended cable, from the cables.
- Do not walk on the cable when installing it.
- The cable must be twisted as close as possible to the mechanical end point.
- The maximum distance between stripped/unstripped wires of the pairs, for a category 5 cable, must not be more than 13mm.
- The distances between the pairs of conductors must be as small as possible, because excessive separation could lead to crosstalk problems.
- Only the length of cable absolutely necessary must be stripped. This must not be more than 25mm.

Failure to respect the above rules could cause a reduction in system performance. Correct installation is obtained by following the instructions of the individual components, as indicated in the instruction sheets and the user manuals. Do not lay multimedia cables together with power cables in the same conduit. When using trunking to lay power cables and multimedia wiring make sure that there is adequate separation by using diaphragms or partitions.

MAXIMUM PULLING FORCE: 11KG

PRECAUTIONS FOR LAYING IN PIPING





Example of twisted or damaged cable

WIRING DIAGRAMS

Diagram 1 - Home with 4 rooms and a small home data network

Diagram 2 - Home with 4 rooms and a small home data network and distribution of the telephone service

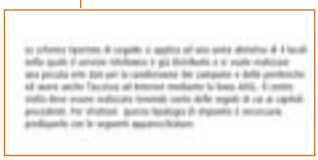
Diagram 3 - Home with 4 rooms, distribution of the TV + SAT signal and combination with 2 wire video door entry system

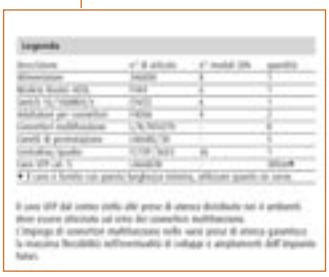
Diagram 4 - Home with 4 rooms, combination of the sound system with 2 wire video door entry system and distribution of the telephone and data

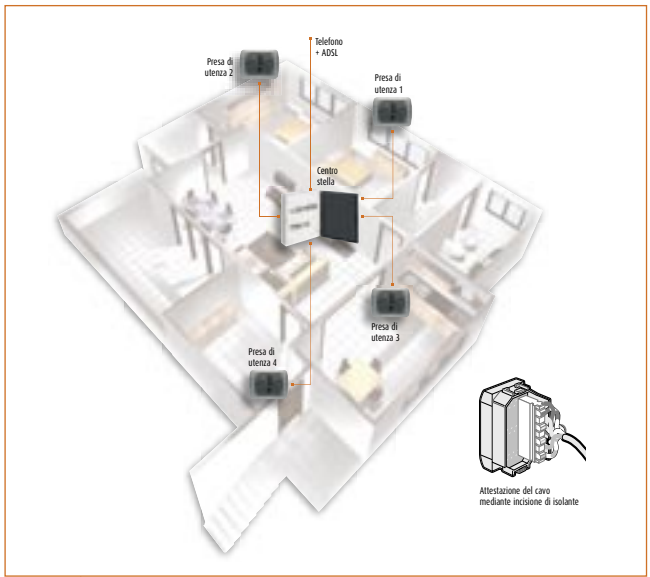
Description of the type of system

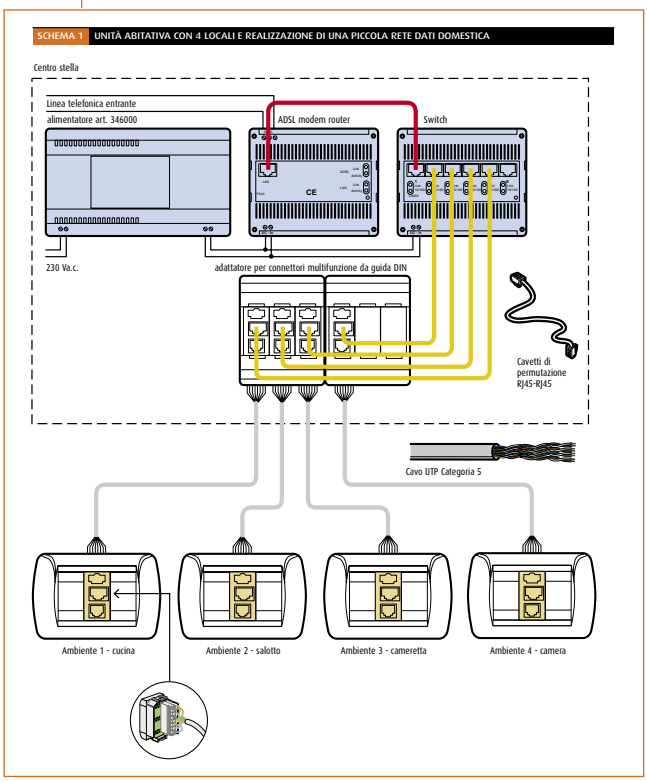
List of the Material

System wiring diagram









Layout and positioning of the service user points

WIRING DIAGRAMS
Setting up a small home data network

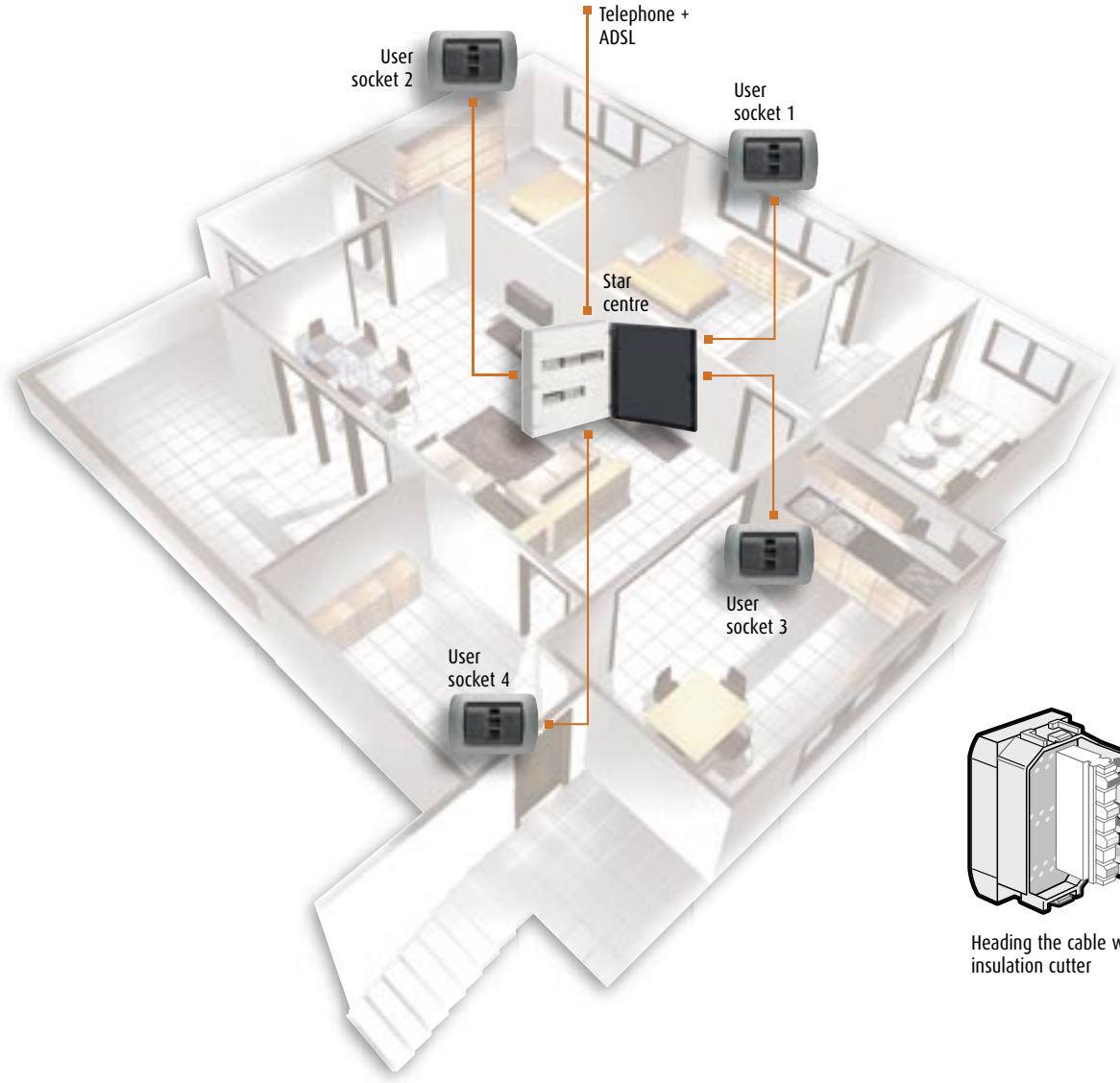
The diagram shown below applies to a home with 4 rooms in which the telephone service is already distributed and we want to make a small data network to share the computer and peripherals and also have access to Internet via the ADSL line. The star centre must be made taking account of the rules given in the previous chapters. This type of system requires the following devices.

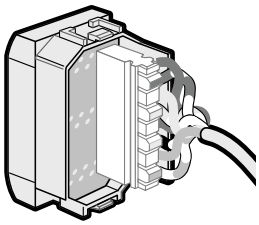
Legend

Description	Item	No. of DIN mod.	Quantity
Power supply	346000	8	1
ADSL Modem router	F444	6	1
10/100Mbit/s switch	C9455	6	1
Adapter for connectors	F400A	4	2
Multifunction connectors	L/N/NT4270	-	8
Patch cords	L4668D/30	-	5
Unit/board	F215P/36D3	36	1
Cat. 5 UTP cable	L4668CM	-	305m*

* The cable is supplied with this minimum length, use as much as is needed.

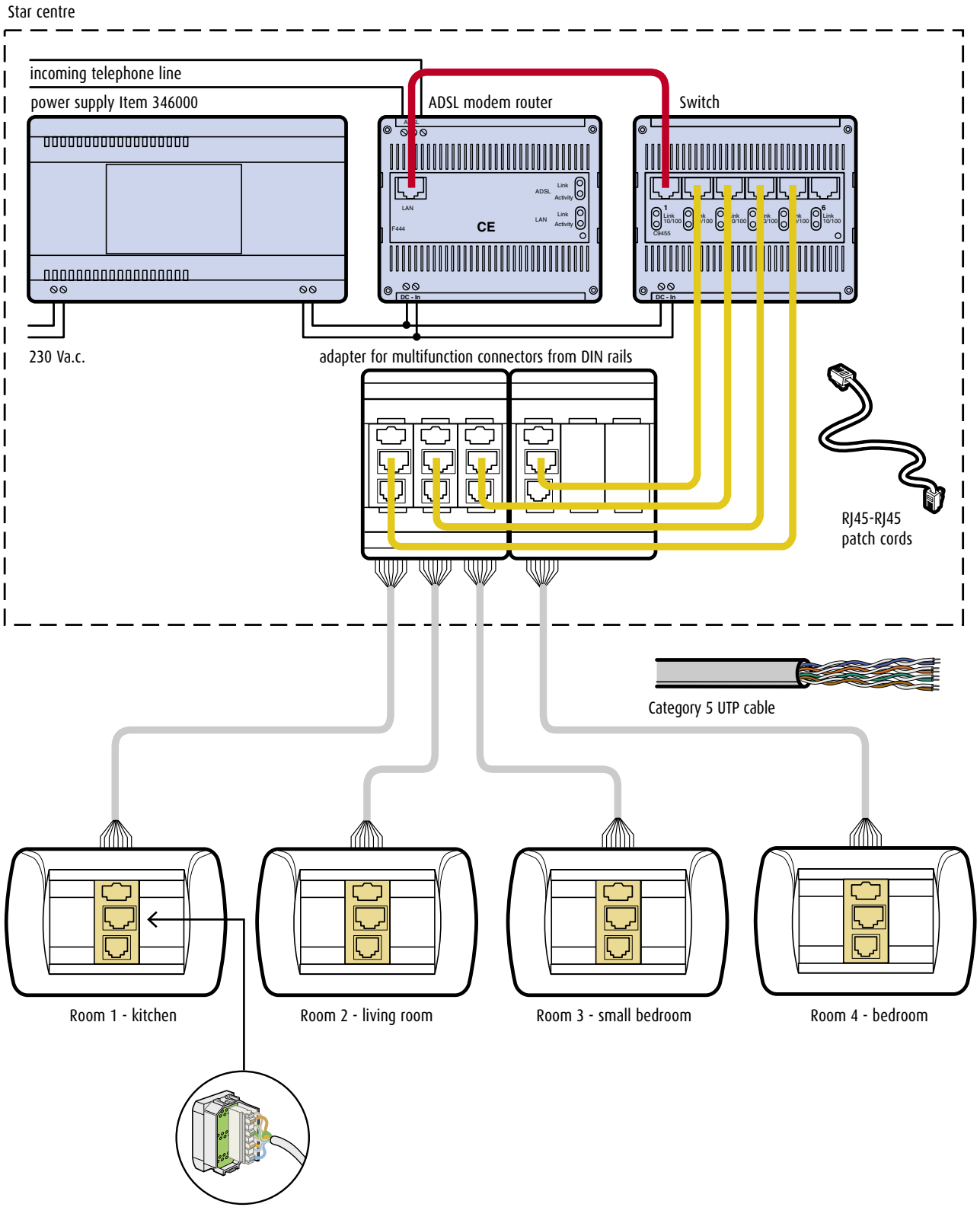
The UTP cable from the star centre to the user point distribution in the 4 rooms must be headed on the back of the multifunction connectors. Using multifunction connectors in the various user sockets guarantees maximum flexibility if the system is developed or expanded in the future.





Heading the cable with insulation cutter

DIAGRAM 1 HOME WITH 4 ROOMS AND SETTING UP A SMALL HOME DATA NETWORK



WIRING DIAGRAMS - Setting up a home data network and telephone distribution

The diagram shown below proposes the application of the previous diagram adding the telephone service star distributed in all the rooms. In this case the telephone distribution is obtained automatically. The modifications are at star centre level where an extra ADSL filter and extra RJ11 connectors must be fitted.

Legend

Description	Item	No. of DIN mod.	Quantity
Power supply	346000	8	1
ADSL Modem router	F444	6	1
10/100Mbit/s switch	C9455	6	1
Adapter for connectors	F400A	4	3
Multifunction connectors	L/N/NT4270	-	8
RJ11 connectors	L/N/NT4262/11	-	4
Patch cords	L4668D/30	-	5
Patch cords	L4668T/30	-	4
Unit/board	F215P/36D3	36	1
ADSL filter	S2609	-	1
Cat. 5 UTP cable	L4668CM	-	305 m*

* The cable is supplied with this minimum length, use as much as is needed.

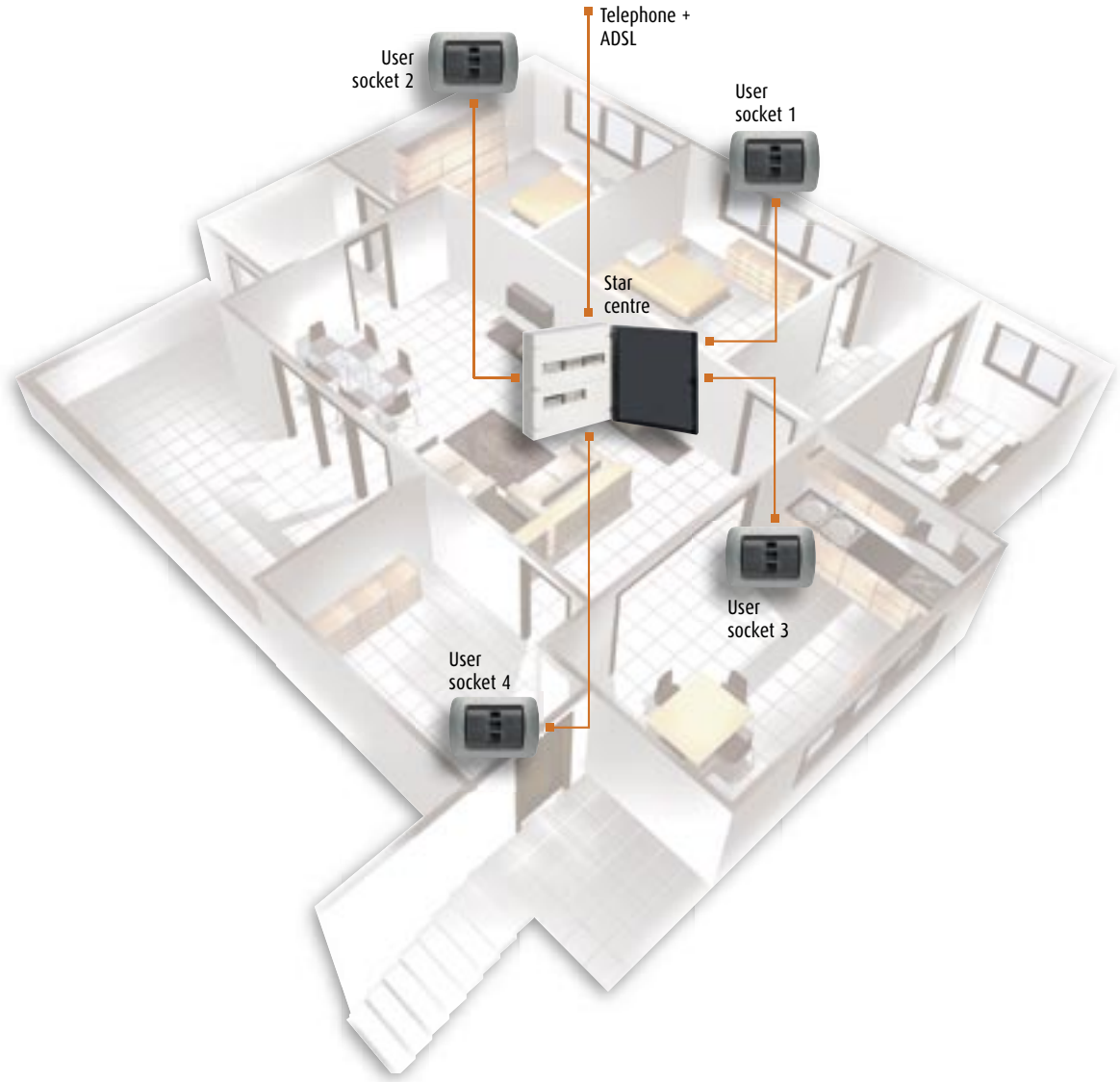
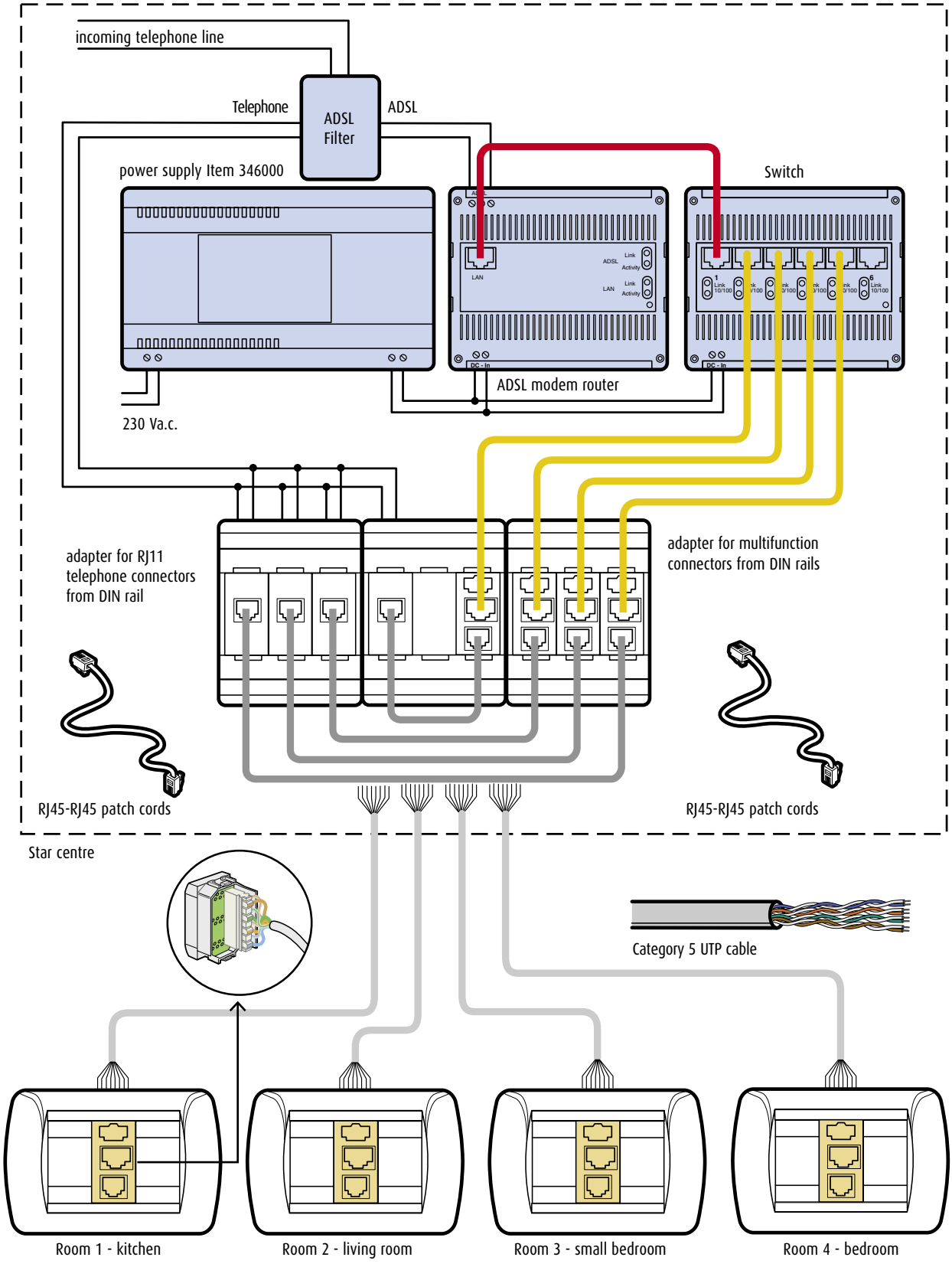


DIAGRAM 2 HOME WITH 4 ROOMS AND SETTING UP A SMALL HOME DATA NETWORK AND DISTRIBUTION OF THE TELEPHONE SERVICE



WIRING DIAGRAMS - Distribution of the TV+SAT signal and combination with the 2 wire video handset

The diagram shown below shows the possibility of distributing the TV+SAT signal in the 4 rooms and being able to see a caller from a 2 wire door entry system entrance panel on the TV. This application can be produced simply by installing a TV HUB and a 2 wire BUS modulator in the star centre.

Legend

Description	Item	No. of DIN mod.	Quantity
Power supply	346000	8	1
TV HUB	F443	6	1
2 wire BUS modulator	F442	6	1
Adapter for connectors	F400A	4	2
Type F TV connectors	L/N/NT4269F	-	4
Shunted TV connectors	L/N/NT4202D	-	4
Patch cords	L4668TV/30	-	5
Unit/board	F215P/36D3	36	1
Coaxial cable	-		as much as is needed

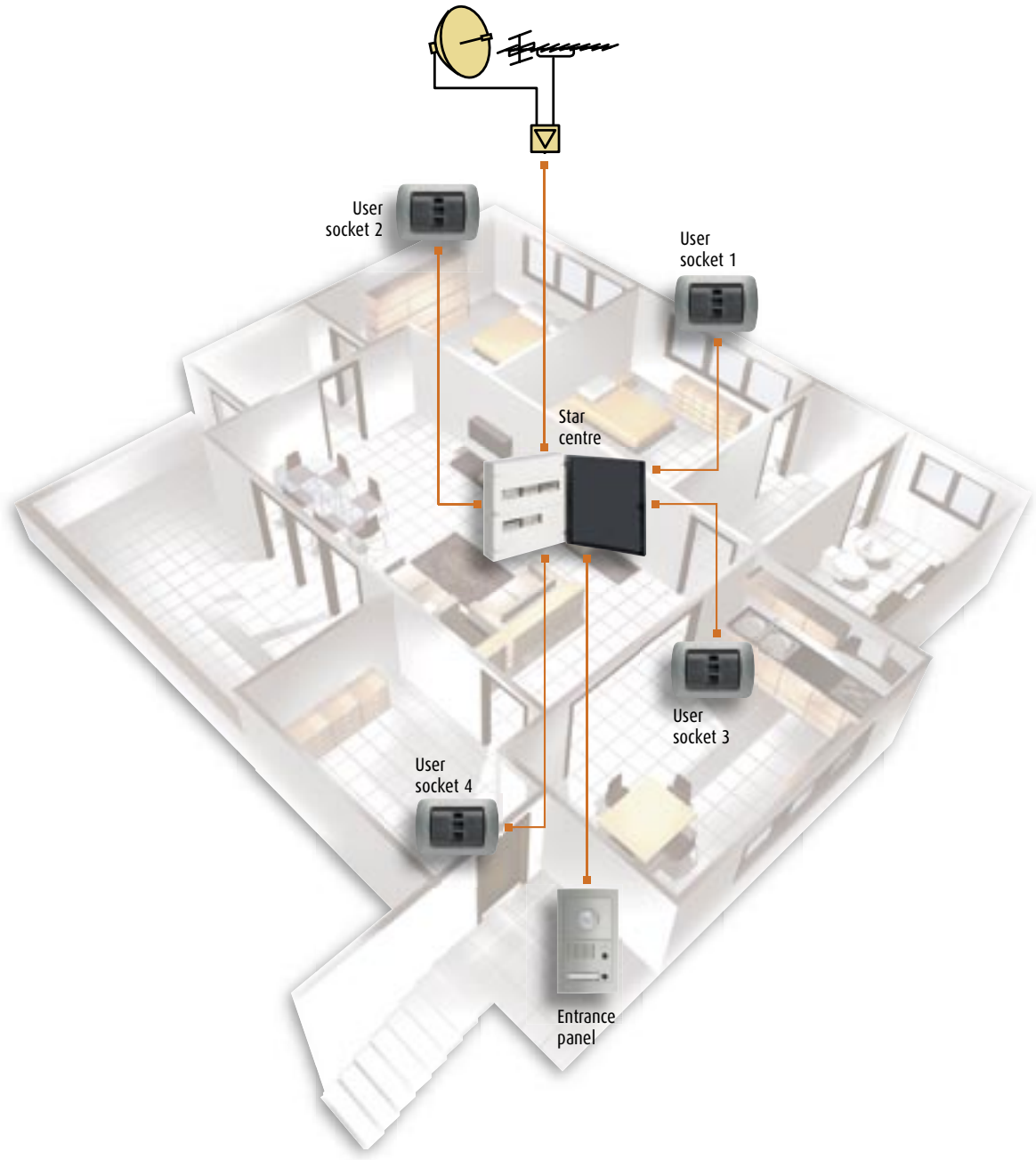
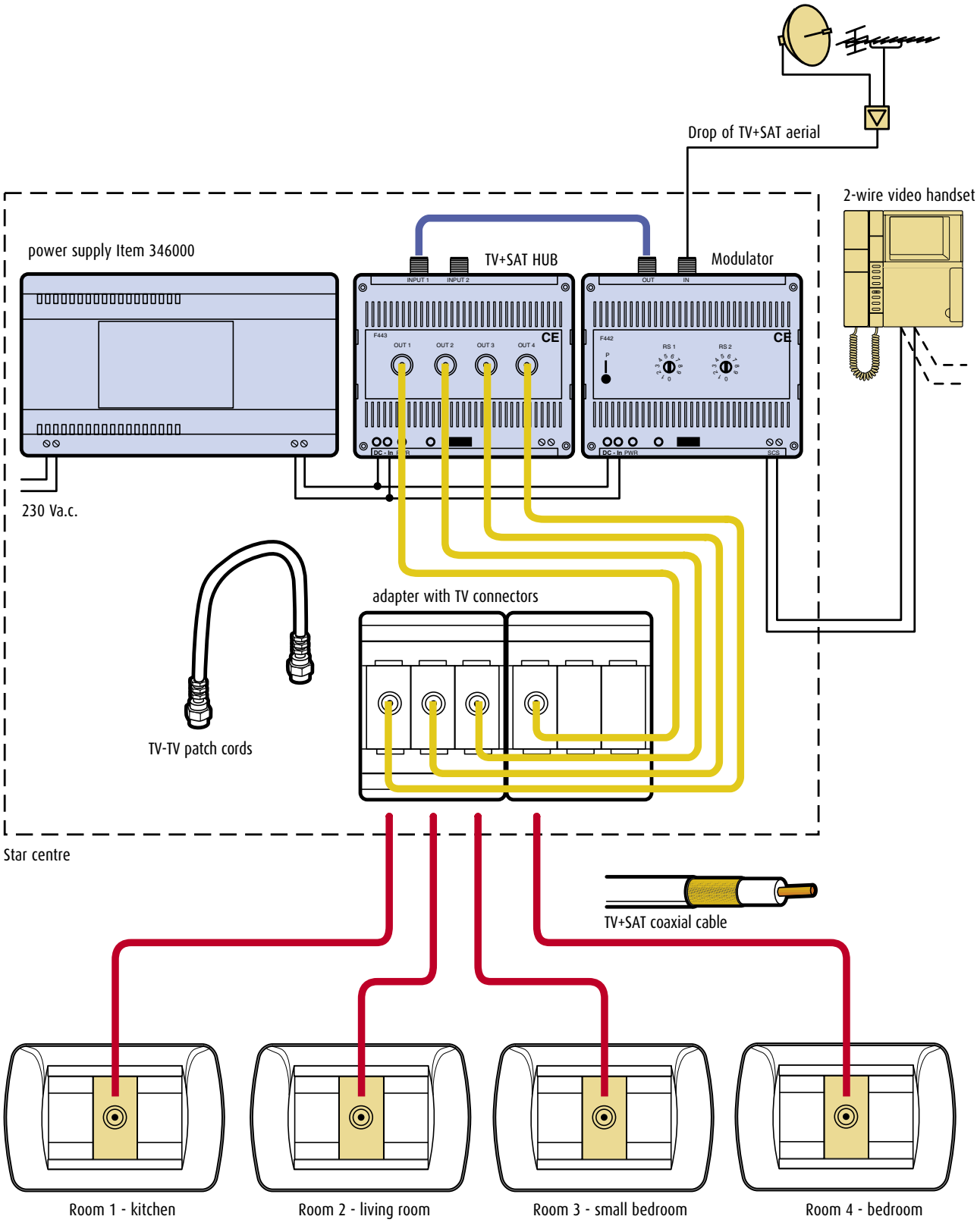


DIAGRAM 3 HOME WITH 4 ROOMS DISTRIBUTION OF THE TV+SAT SIGNAL AND COMBINATION WITH 2 WIRE VIDEO DOOR ENTRY SYSTEM



WIRING DIAGRAMS - Sound system combined with video handset, data network and telephone system

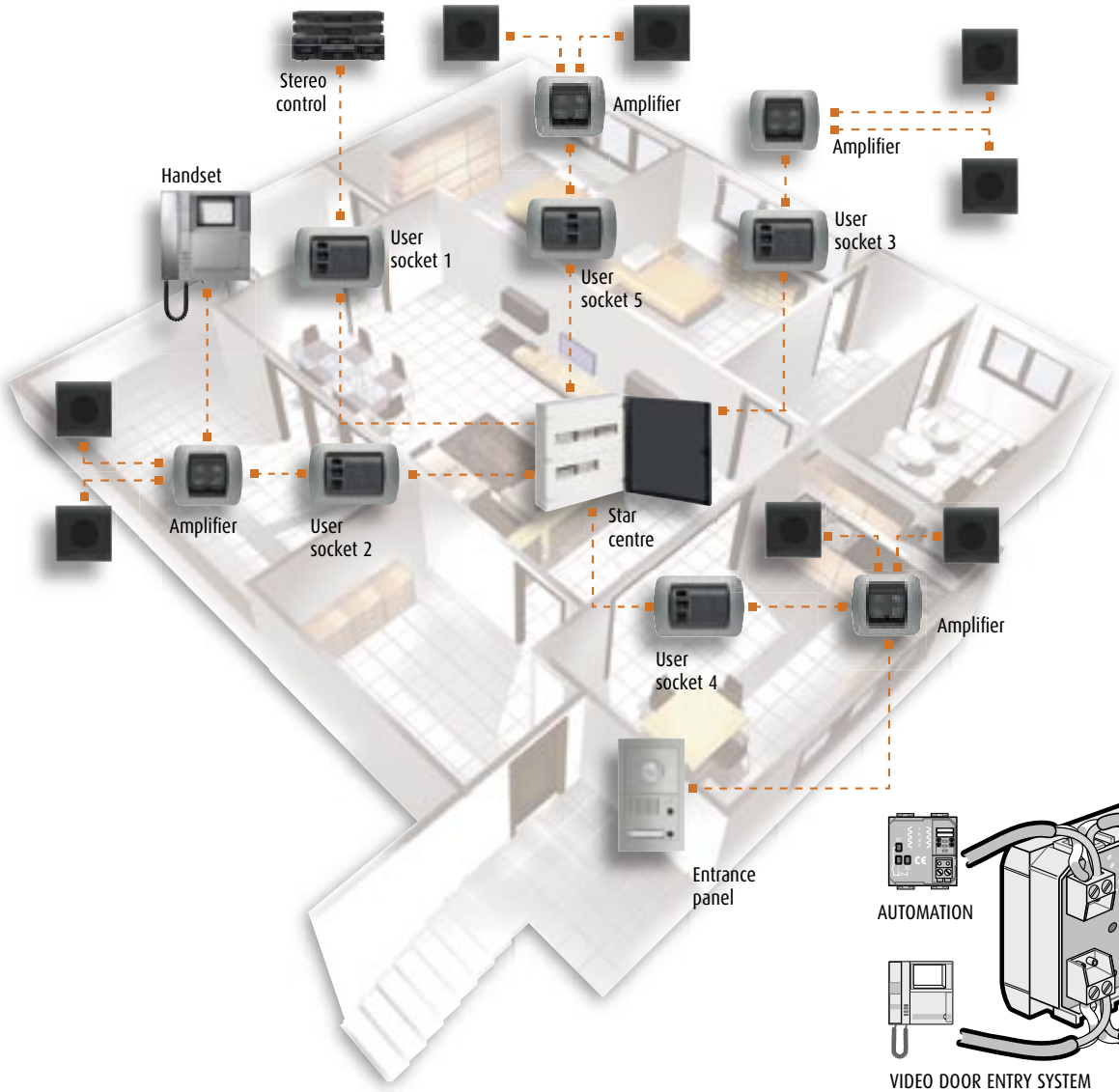
This diagram shows the possibility of setting up a combined system with star distribution of the My Home sound system and a 2 wire door entry system with the extra distribution of the telephone in all the rooms and setting up a small home data network. For this type of system the following components must be installed.

The multifunction plus connectors are installed in the user sockets distributed in the rooms, to guarantee correct combination between the sound systems and 2 wire video door entry system with in/out connection as shown in the figure. This type of connection should not be confused with the star distribution provided for the multimedia wiring which is functional between star centre and user sockets.

Legend

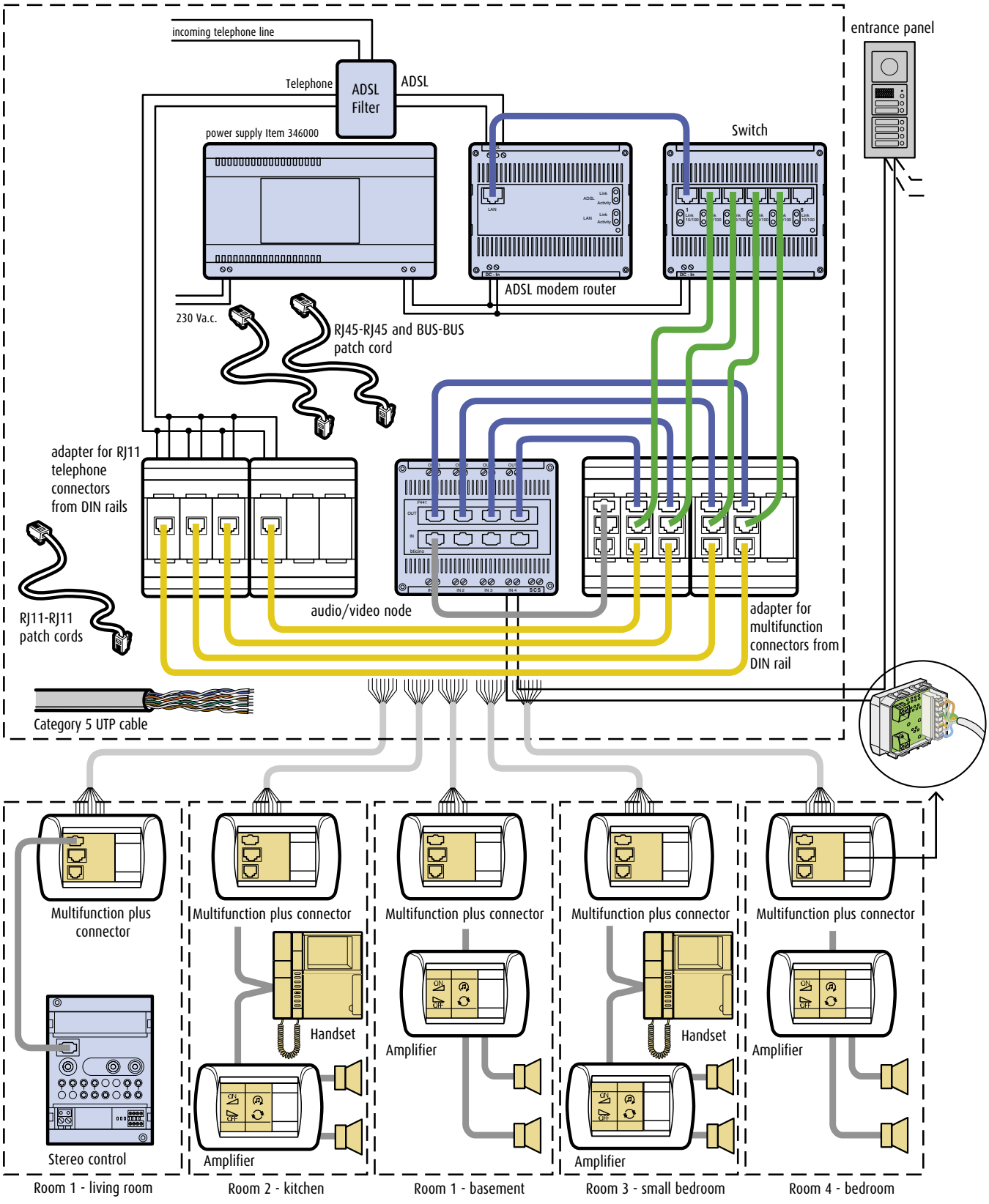
Description	Item	No. of DIN mod.	Quantity
Power supply	346000	8	1
Audio video node	F441	6	1
ADSL Modem router	F444	6	1
10/100Mbit/s switch	C9455	6	1
Adapter for connectors	F400A	4	3
Multifunction connectors	L/N/NT4270	-	6
Plus multifunction connectors	L/N/NT4270P	-	4
RJ11 connectors	L/N/NT4262/11	-	4
Patch cords	L4668BUS/35	-	5
Patch cords	L4668D/30	-	5
Patch cords	L4668T/30	-	4
Unit/board	F215P/54D	54	1
ADSL filter	S2609	-	1
Cat. 5 UTP cable	L4668CM	-	305 m*

* The cable is supplied with this minimum length, use as much as is needed.



VIDEO DOOR ENTRY SYSTEM
Heading the UTP cable on user socket and in/out connection to combine sound system and video door entry system

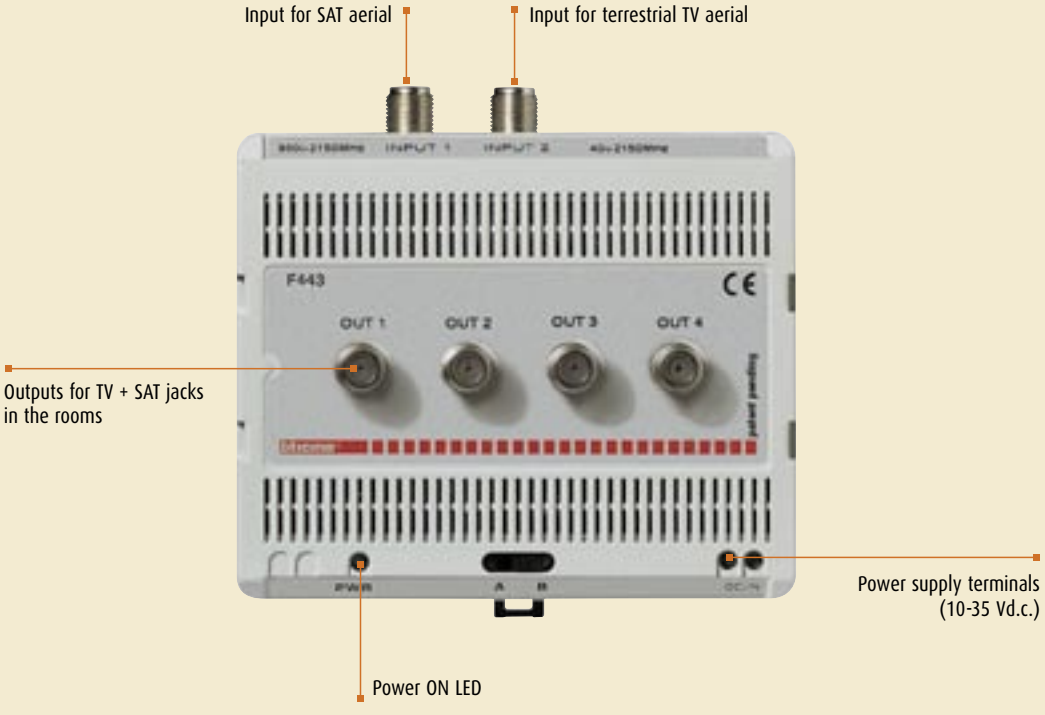
DIAGRAM 4 HOME WITH 4 ROOMS COMBINATION OF THE SOUND SYSTEM WITH 2 WIRE VIDEO DOOR ENTRY SYSTEM AND DISTRIBUTION OF THE TELEPHONE AND DATA



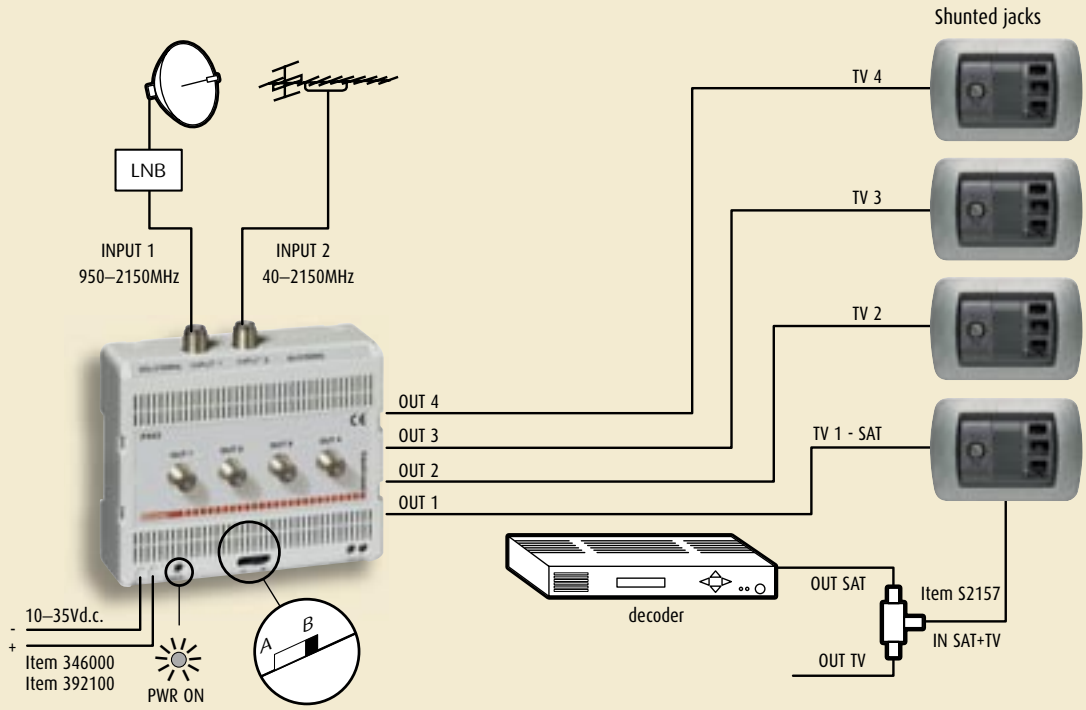
TECHNICAL FEATURES
TV HUB

The TV HUB is an active device which can be installed in the star centre to distribute the television and satellite signals. 4 TV + SAT jacks distributed in the home can be connected to this device. There are two input connectors for the terrestrial and Satellite TV aerial. The TV HUB mixes the signals directly, allowing the great advantage of leading just one coaxial cable to a single TV jack to see both terrestrial and satellite television channels. There are various installation solutions as shown in the diagrams below.
When connecting the TV and SAT aerials follow the indications given on the instruction sheets rigorously and avoid inverting the position of the two incoming cables. When there are interferences on the video signal insert a mix/demix filter downstream of the LNB of the satellite aerial. Use only shunted TV + SAT jacks. When the aerial system is made using only the TV input to distribute the SAT signals as well as shown in diagrams 3 and 4 install a closing impedance of 75 Ohm insulated on the free input.

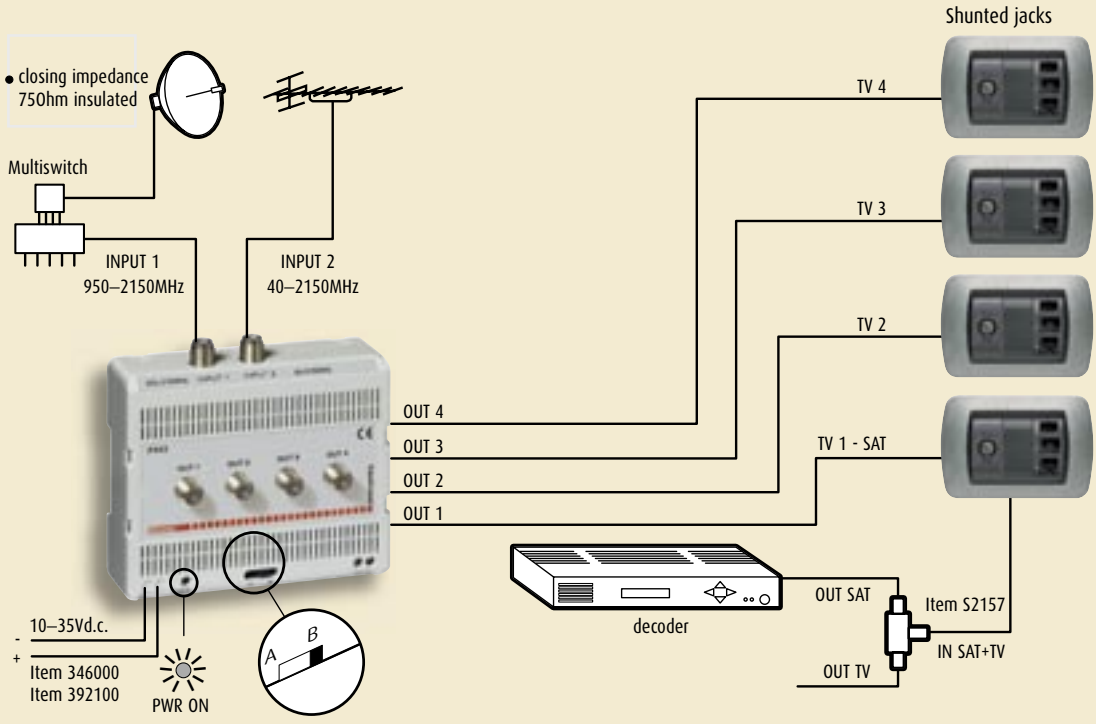
Technical features	
Power supply voltage	10-35 Vd.c.
No. of DIN modules	6
Maximum current absorbed	210mA at 12Vd.c. 100mA at 24Vd.c. 45mA at 27Vd.c.
Maximum attenuation INPUT 1 - OUT 1-4	>30dB (40-860 MHz) <15dB (950-2150 MHz)
MAX power of the input signal INPUT 2 - OUT 1-4	<5dB (40-860 MHz) <3.5dB (950-2150 MHz)
MAX power of the input signal	89dBµV
MAX power of the output signal	83dBµV
No. of type F outputs	4
Dissipated power	1.4W



SYSTEM WITH SEPARATE TV AND SAT (SINGLE DISH SATELLITE)

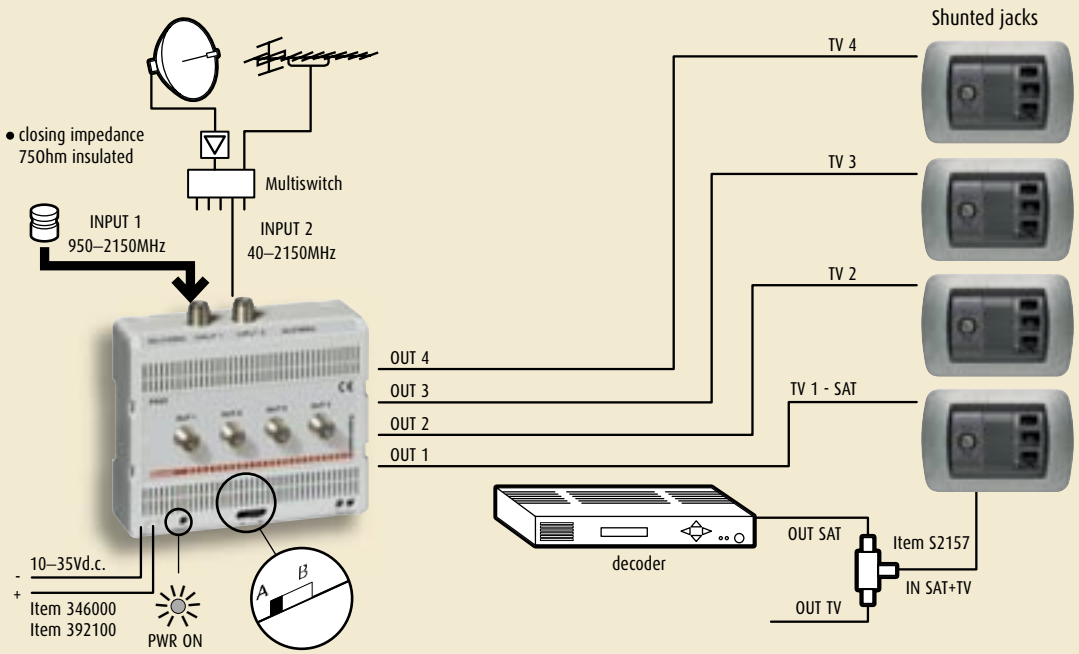


SYSTEM WITH SEPARATE TV AND SAT (MULTISWITCH SATELLITE)

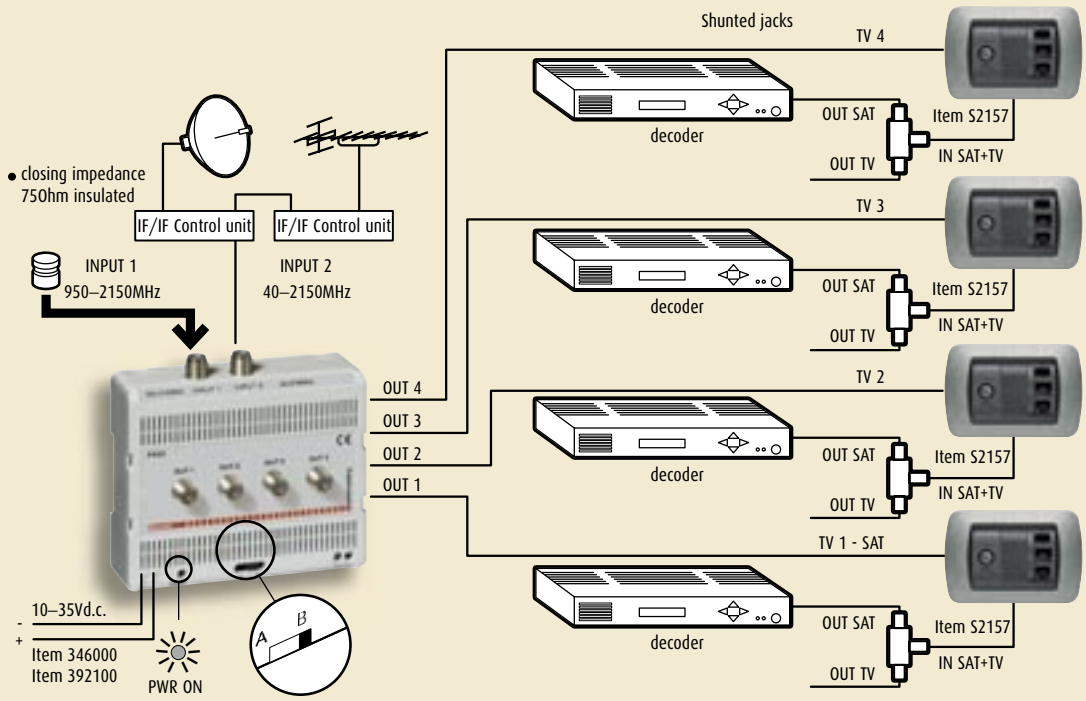


TECHNICAL FEATURES
TV HUB

SYSTEM WITH TV AND SAT WITH MULTISWITCH (SINGLE CABLE)



TV AND SAT SYSTEM (SINGLE CABLE)

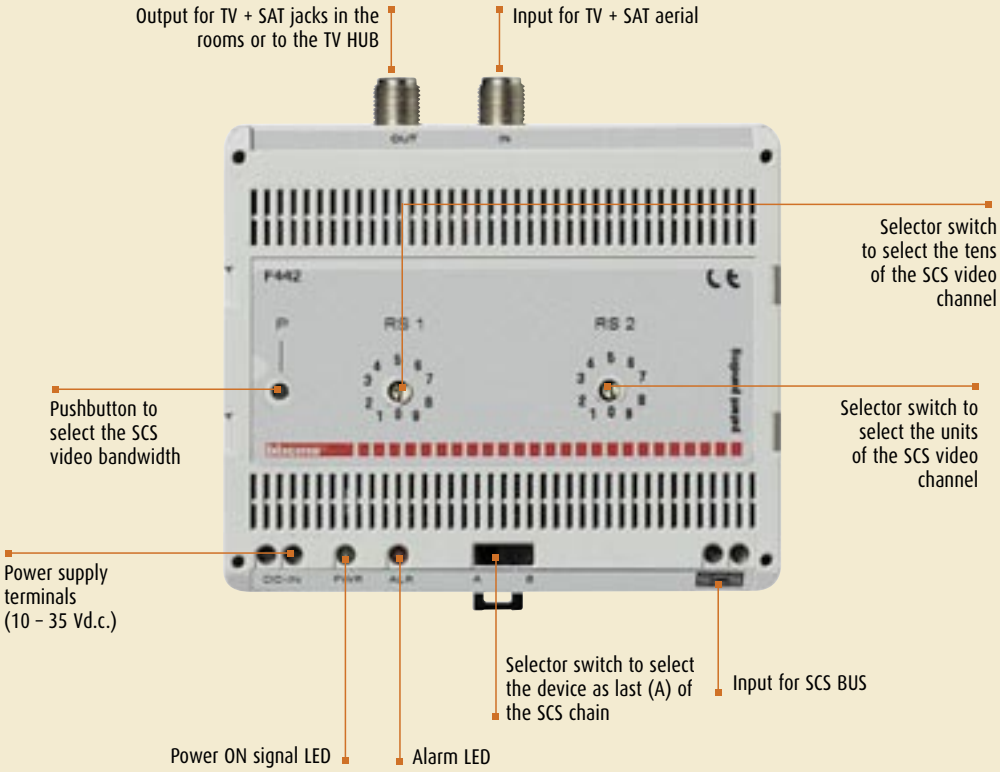


TECHNICAL FEATURES
SCS/TV modulator

The SCS/TV modulator is a device which can be installed on a DIN 35 rail which can display the video signal arriving from an entrance panel of the two wire video door entry system on the home television. In this way you can see who is ringing the bell directly on the television. This device (which can be used in one-family systems) must be connected to the terrestrial or SAT aerial on the specific "F" input and to the television (or as an alternative to the TV HUB) on the special output connector. In the lower part there are 2 screw terminals for the connection from the shunted two wire BUS from the entrance panel of the video door entry system. To display the call on the television the video channel must be set on the television which must correspond to that selected on the modulator by means of the front regulators (the one to the left sets the tens and that to the right the units). The television must be set up to select the channel in the S bandwidth to be selected between S11 and S41. The Video CH program which can be selected by the television remote control must be associated to the S bandwidth channel selected to display the SCS signal. The video programme is the one which can be called by the remote control to see the SCS video output. The SCS/TV modulator has a selector switch to be positioned on letter A when the device is the last of the SCS chain, as shown in the figure. As well as a green power supply LED there is also a red alarm LED. If the red ALARM LED lights up check the wiring and the connections.

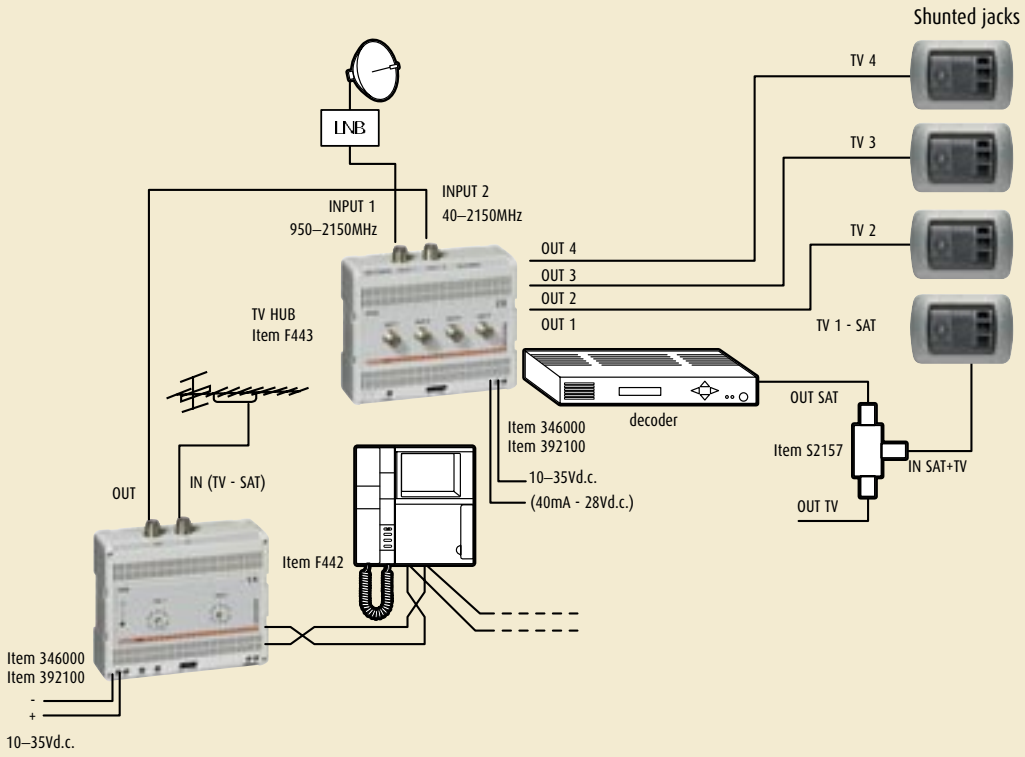
Technical features

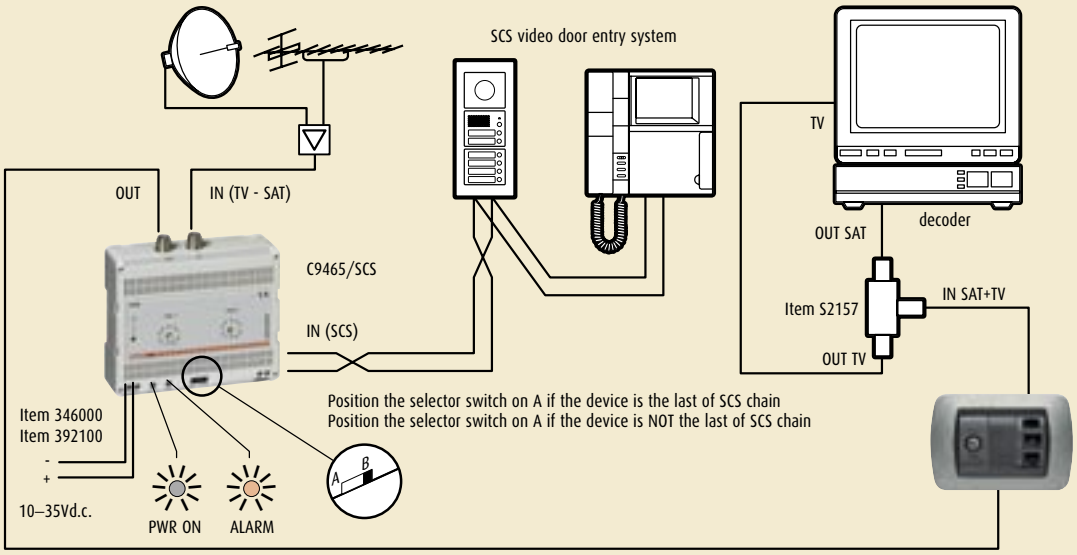
Power supply voltage	10-35 Vd.c.
No. of DIN modules	6
Maximum current absorbed	210mA at 12Vd.c. 100mA at 24Vd.c. 90mA at 27Vd.c.
Rated frequency	40-2150 MHz
Output power (bandwidth S)	88dBµV/750Ω
No. of type F outputs	1
Dissipated power	3W



TECHNICAL FEATURES
SCS/TV modulator

SYSTEM WITH TV AND SAT WITH MULTISWITCH (SINGLE CABLE)

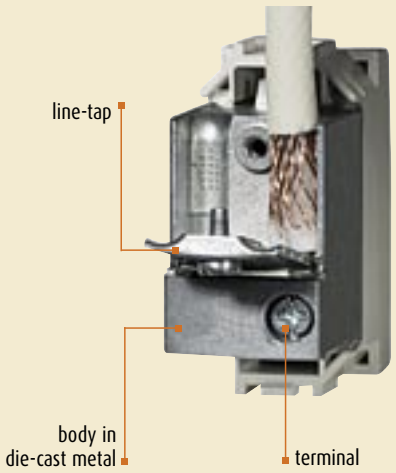




Note: If the red ALARM LED lights up check the wiring and the connections

TECHNICAL FEATURES
TV+SAT coaxial jacks with male connector

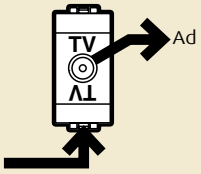
The range of TV jacks is made up of items corresponding to European directives IEC EN 50083 (Distribution systems for television systems). As laid down by the standard the input connector is IEC169-2 male.
Made with innovative manufacturing solutions, such as the construction in die-cast aluminium and the adoption of new-generation terminals, the 1-module TV jacks ensure high shielding against domestic electromagnetic fields allowing the correct distribution of TV and SAT signals with frequencies between 40 and 2400 MHz.
Shielding efficiency: class B.



CHARACTERISTIC DATA

Item L/N/NT4202D - L/N/NT4202DC

	Ad	Zo			B1	FM	VHF	UHF	SAT IF	
				22 / 0,6	40-68	87,5-108	120-470	470-862	950-2150	2150-2400
	dB	Ω	V/mA	KHz / V	MHz	MHz	MHz	MHz	MHz	MHz
L/N/NT4202D	≤1,5	75	≤500							
L/N/NT4202DC	≤1,5									



Item L/N4210D

	Ad	Zo	OUT			B1	FM	VHF	UHF	SAT IF	
					22	47-68	87,5-108	120-470	470-862	950-2050	2150-2400
		Ω		mA	KHz	MHz	MHz	MHz	MHz	MHz	MHz
L/N/4210D	dB	75	TV			1		1,7 - 0,5	0,5 - 3,5		
			RD				1,5 - 2,5				
			SAT	500						2 - 0,7	

Ap= Transition attenuation **Zo**= Characteristic impedance **Ad**= Direct or shunted attenuation

TECHNICAL FEATURES
ADSL Modem router

The ADSL Modem router is a device which allows simple and efficient connection to the Internet, once a contract has been stipulated with a telephone service Provider. The ADSL modulation on a telephone pair can use the copper cables already available in the home arriving from the telephone control unit for broadband connections. This connection is suitable for fast navigation on the Internet and to use the various interactive services. The ADSL allows installing a physical network connection from inside the home to the outside world and using the same telephone line for telephone calls at the same time, without interference between the two services. The use of ADSL in the home is increasing in step with the offers of the various providers. The two contract modes are to fixed IP or to dynamic IP. The BTicino ADSL Modem router allows both modes. The ADSL Router can be connected to the switch to extend the ADSL access to other user jacks at the same time. The ADSL modem router offers extra network functions such as DHCP services (automatic assignment of the IP addresses to the terminals connected in network) and the Firewall (can block access from the outside by filtering IP addresses and TCP/UDP addresses).

PRE-REQUISITES

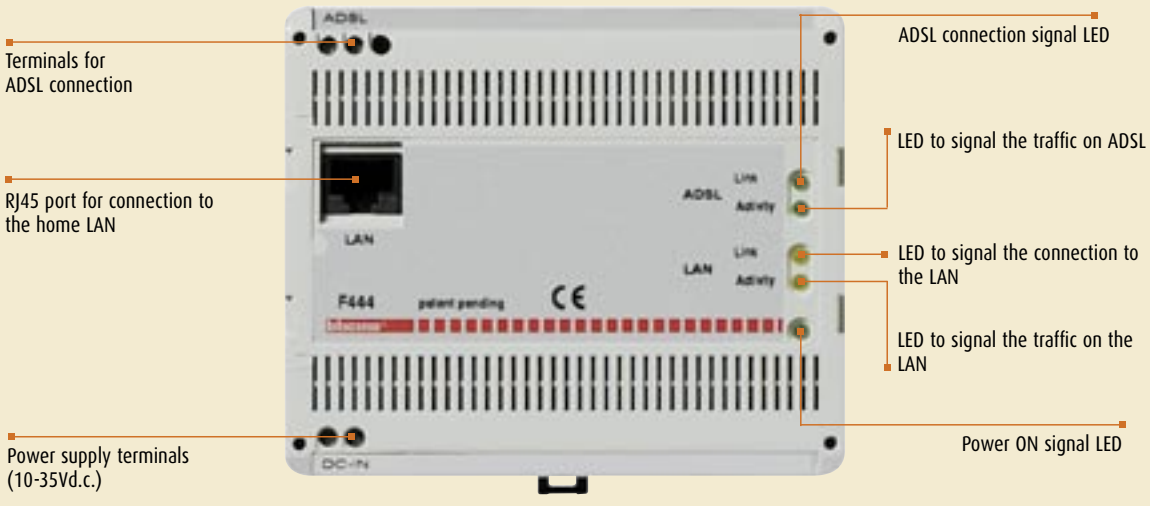
- Computer with Ethernet 10/100 Mbit/s network cards
- Software drivers for the network cards installed on each computer
- TCP/IP protocol installed on each computer
- ADSL line on analogue telephone line (Annex A)
- ADSL internet contract stipulated with an Internet Service Provider
- Data for the ADSL contract (ask the ISP)

Technical features

Power supply voltage	10-35Vd.c.
No. of DIN modules	6
Current absorbed	282mA at 12Vd.c. 155mA at 24Vd.c. 144mA at 27Vd.c.
No. of RJ45 ports	1
Type of connection	terminal
Signals	LED
Dissipated power	3.9W

FEATURES

- Asymmetric data speed
- Maximum speed receiving (downstream): 8Mbit/s (dmt)
- Maximum speed transmitting (upstream): 1Mbit/s (dmt)
- ADSL standards:
  ANSI T1.413 Issue 2
  ITU G.992.1 (G.dmt)
  ITU G.992.2 (G.Lite)
- Protocols Supported:
  RFC2364 (PPP over ATM)
  RFC2516 (PPP over Ethernet)
  RFC1483 (Bridged e Routed Ethernet over ATM)
- WAN ADSL interface: with screw terminal
- LAN 10/100 Mbit/s port
- NAT and NAT Export support
- Support of two LAN (public and private)
- Server and customer DHCP
- Static and RIPv2 routing
- Firewall - stateless
- PAP and CHAP authentication
- Web based and via utility configuration

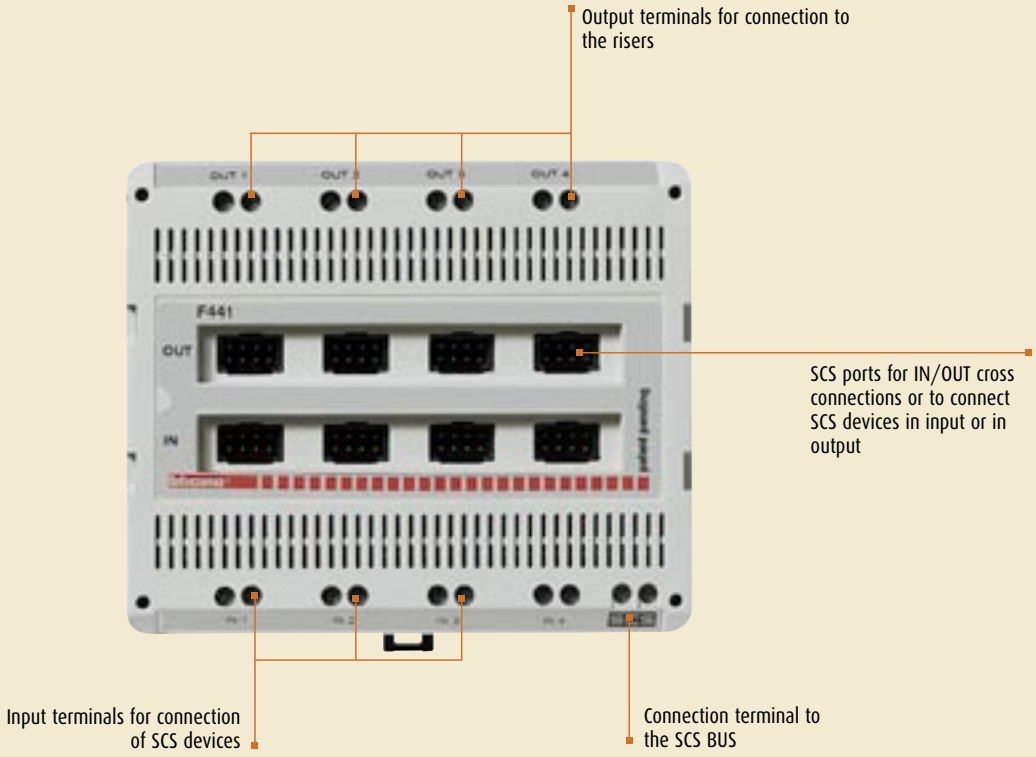


TECHNICAL FEATURES
Audio/video node

The audio/video node is a device for installation on a DIN35 rail which acts as a mixer and distributor for sources and receivers with SCS technology. This active device is set up with 2 series of 4 terminals for the connection of at most 4 2 wire sources (e.g. 2 wire video entrance panels) and with 2 series of 4 terminals for the connection of 2 wire receivers (e.g. 2 wire video handsets). The two series of terminals feature screw terminals (outer part) and cross connectors (inner part). If any screw terminal is employed the corresponding cross connector must not be used. On the IN side the fifth screw terminal receives power from the system power supply (SCS). Specific patch cords allows cross connection of the audio/video signals directly on to the enabled multifunction connectors, thus exploiting the main features of multimedia wiring.

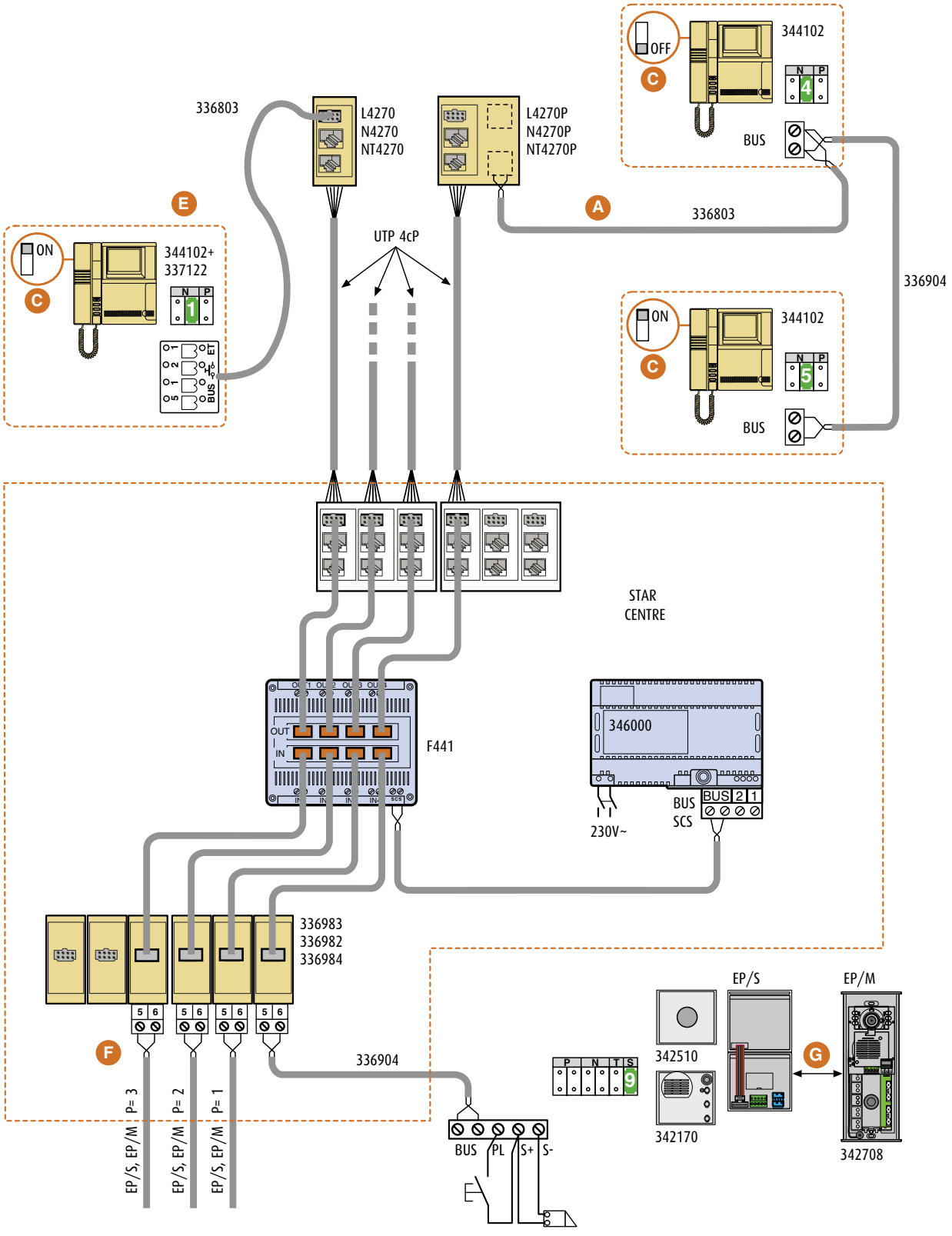
Technical features

Power supply voltage	18-27Vd.c.
No. of DIN modules	6
Current absorbed	17mA a 27Vd.c
No. of INPUT available	4
No. of OUTPUT available	4
Dissipated power	0.5W



TECHNICAL FEATURES
Audio/video node

ONE-FAMILY SYSTEM WITH 4 ENTRANCE PANELS – 64 HANDSETS, 1 RISER EXTRA POWER SUPPLY OF THE ENTRANCE PANELS

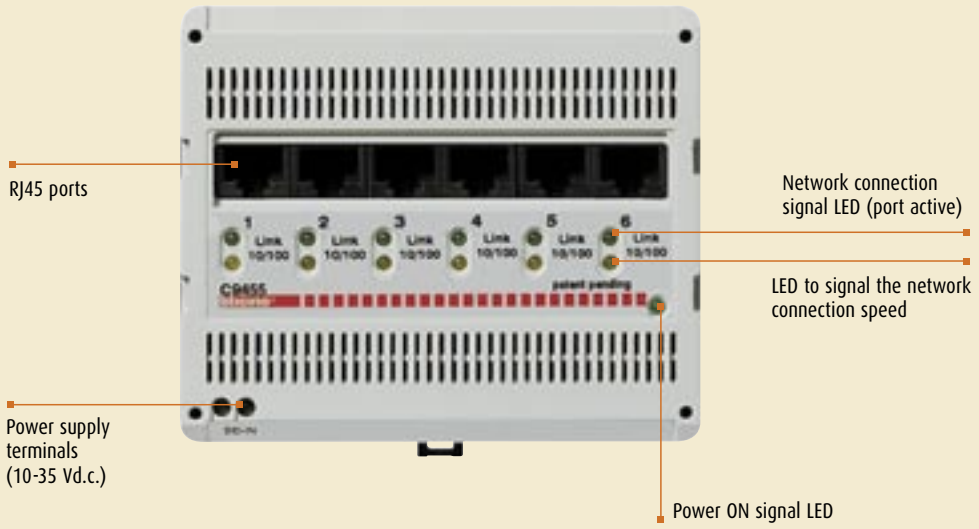


TECHNICAL FEATURES
6-port switch for DIN 35 rail

The BTicino switch is a device which can distribute the data networks to several points in the home. This devices has 6 RJ45 ports and supports 10/100 Mbit/s Ethernet connections, automatically adapting to the maximum speed supported by the network terminals connected to each port. The AutoMDX function of each of the 6 RJ45 ports means that straight or crossed network cables can be used to connect the terminals. Use of the switch in the home data network allows optimal use of the bandwidth because, unlike a normal HUB, the switch can recognise the destination of the data package it receives in input and send it only to the port of destination. A switch establishes a virtual temporary connection between the source and the point of destination, closing it at the end of the connection. A port can be connected to a second switch when the home data network is extended to more than 6 terminals.
Use patch cords with a maximum length of 5 m for the connection.

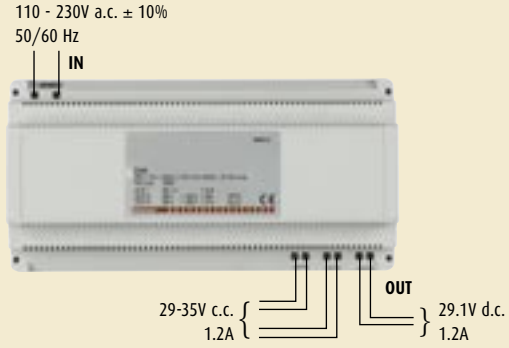
Technical features

Power supply voltage	10-35 Vd.c.
No. of DIN modules	6
Maximum current absorbed	240mA at 12 Vd.c. 100mA at 24 Vd.c. 115mA at 27 Vd.c.
Transmission speed	10/100Mbit/s
Dissipated power	4W



Power supply E48

Power supply unit for MY HOME applications and power supply for active devices of the multimedia wiring. By using the additional E48A1 and E482 modules, it is possible to power the MY HOME systems as a: burglar alarm, automation, temperature control and video door entry system.



Technical features

- Double insulation devices ⧈
- Maximum supplied current: 1200mA
- Size: 10 DIN modules
- Input voltage: 110-230V a.c. 50/60 Hz
- Output voltage: 29-35V c.c.
- Dissipated power: from 18W to 25W (depending on how many devices are connected)

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