

MY HOME LAYOUT OF THE BUILDING



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GENERAL RULES FOR INSTALLATION

Type of wiring

GENERAL DESCRIPTION

If the user knows the special needs for the My Home systems to be installed in his home a priori, it is easy to identify the type of wiring to be fitted. If not, instead the building should be provided with a series of enough conduits and boxes (device holders and junction) to satisfy the greatest number of requests possible.

As a function of the My Home systems to be installed, you can choose between two different types of wiring:

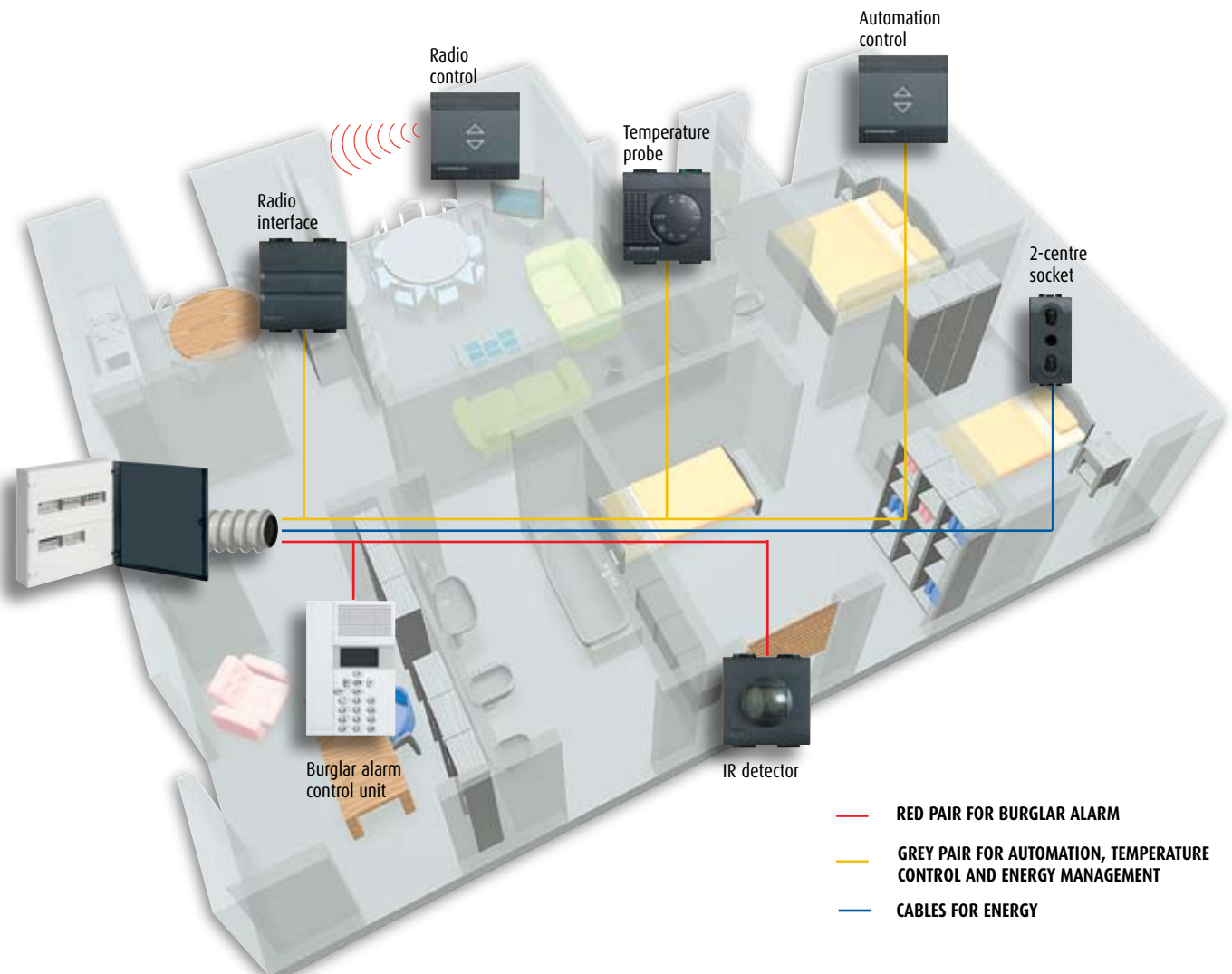
- with free structure
- with "star" structure.

Wiring with free structure is applied when the Automation, Burglar-alarm, Energy Saving, 8 wire Video door entry and Temperature control systems must be installed. Wiring with "star" structure is instead used to make EDP, telephone, TV+SAT, 2 wire Video door entry and Sound systems.

WIRING WITH FREE STRUCTURE - GENERAL RULES

This type of wiring is normally used in traditional distributions, however to integrate the My Home systems described above, the following provisions should be taken into account in the design phase:

- a) The BUS route may be the same as the power line, made with traditional underfloor trunking, in wall-mounting trunking, in underfloor systems or in trunking in false ceiling. This solution allows a reduction of the installation times and requires making fewer holes in the wall. If the building already has the energy system conduits with diameter not less than 20 mm, they can be used to insert the sheathed BUS pair, supplied by BTicino and characterised by an insulation voltage of 300/500V. If instead a My Home system is being made in a new building the energy wiring conduits should be kept separate from the My Home conduits. These should be chosen with suitable diameter to satisfy any request for actual and future systems.
- b) The provisions given above also extend to the installation of the junction boxes which must be sized and situated in positions which make it easier to connect the pair "in parallel" in several stretches of system.
- c) If the shutters and rolling shutters are to be motorised, provide for the arrival of the energy services and the BUS Automation pair near the rolling shutters boxes as well.



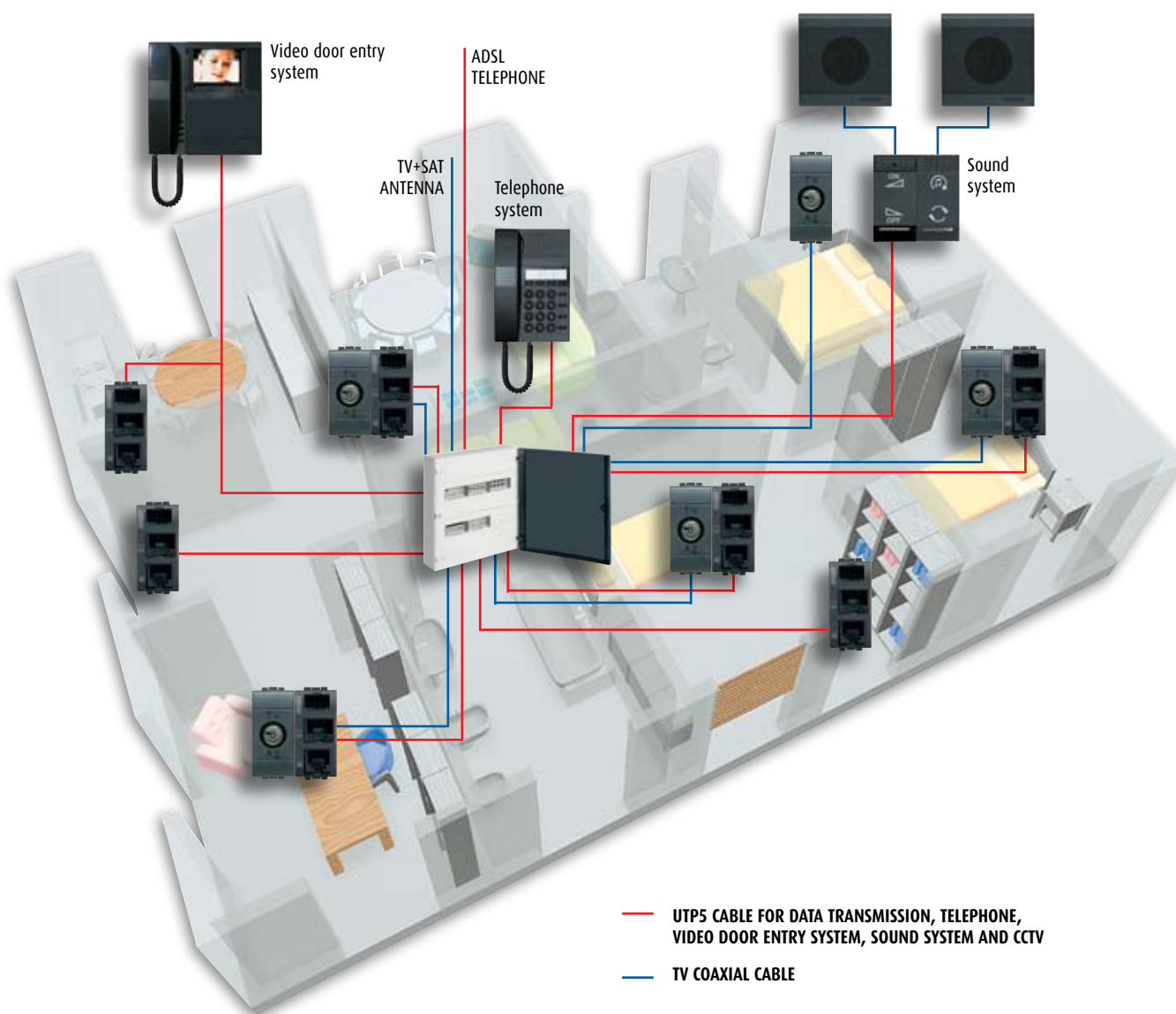
WIRING WITH "STAR" STRUCTURE - GENERAL RULES

This wiring is indicated when the data transmission, Video door entry, CCTV, Sound, telephone system and TV/SAT systems are to be combined in a single conduit.

The wiring star structure is made up of a central point defined "star centre" where all the peripheral branches of the various wirings converge. As standard the "star centre" is made with a switchboard, a flush-mounting or wall-mounting panel which groups together all the active and passive devices to manage the services which are led inside the apartment from the urban and building networks.

The sizing of a system with star wiring must take account of the following provisions:

- Provide a switchboard which is large enough to allow any future expansions of the functions; we recommend calculating at least 20 - 30% more room.
- Compatible with the building structure, position the "star centre" in a central position in the system. Whenever possible, install the switchboard in a special service room or closet so that it does not spoil the appearance of the room.
- Install the conduits providing junction boxes every 10 metres to pull the cables or to insertion of any signal amplifiers. For the energy system use exclusive piping, the EDP/telephone system/TV services can share the same piping which must have an internal diameter of not less than 18mm (recommended 20mm).



GENERAL RULES FOR INSTALLATION

Type of wiring

INSTALLATION LIMITS OF THE MY HOME APPLICATIONS

In sizing the wiring as a function of the MY HOME applications to be implemented, remember that the limits in length indicated in the tables below must not be exceeded.

MY HOME APPLICATIONS					
NOTE: the distances are calculated assuming that Bticino recommended cables are used	COMFORT			SAFETY	
	LIGHTING	AUTOMATION	SOUND SYSTEM	WIRE BURGLAR ALARM	CCTV
Max. distance between power supply and the furthest away device	250 m	250 m	300 m between sound source and amplifier F502 200 m between sound source and flush-mounting amplifier L/N/NT4562	175 m	350 m between power supply and the furthest away handset 650 m between power supply and the furthest away E.P.
Total length of stretched cable	500 m	500 m	800 m	350 m	3000 m
Max. distance between Entrance Panel and the furthest away Handset					1000 m

MY HOME APPLICATIONS					
	SAVING	COMMUNICATION			CONTROL
	ENERGY MANAGEMENT	VIDEO DOOR ENTRY SYSTEM	INTEGRATED TELEPHONE SYSTEM	TV AND DATA NETWORK	WEB SERVER
Max. distance between power supply and the furthest away device	150 m	350 m between power supply and furthest away handset 650 m between power supply and furthest away entrance panel	550 m Consider the 350 m of the video door entry system + 200 m as max. distance between PABX and audio, video and telephone handset	90 m between switchboard, star centre and user socket	Can not be applied
Total length of stretched cable	300 m	3000 m	3000 m + 200 m for every handset connected to the PABX	**	*
Max. distance between Entrance Panel and the furthest away Handset		1000 m	1200 m		Can not be applied

** See specific indications in the "Multimedia Wiring" section

* See specific indications in the "Multimedia Wiring" and "Control" section

GENERAL RULES FOR INSTALLATION

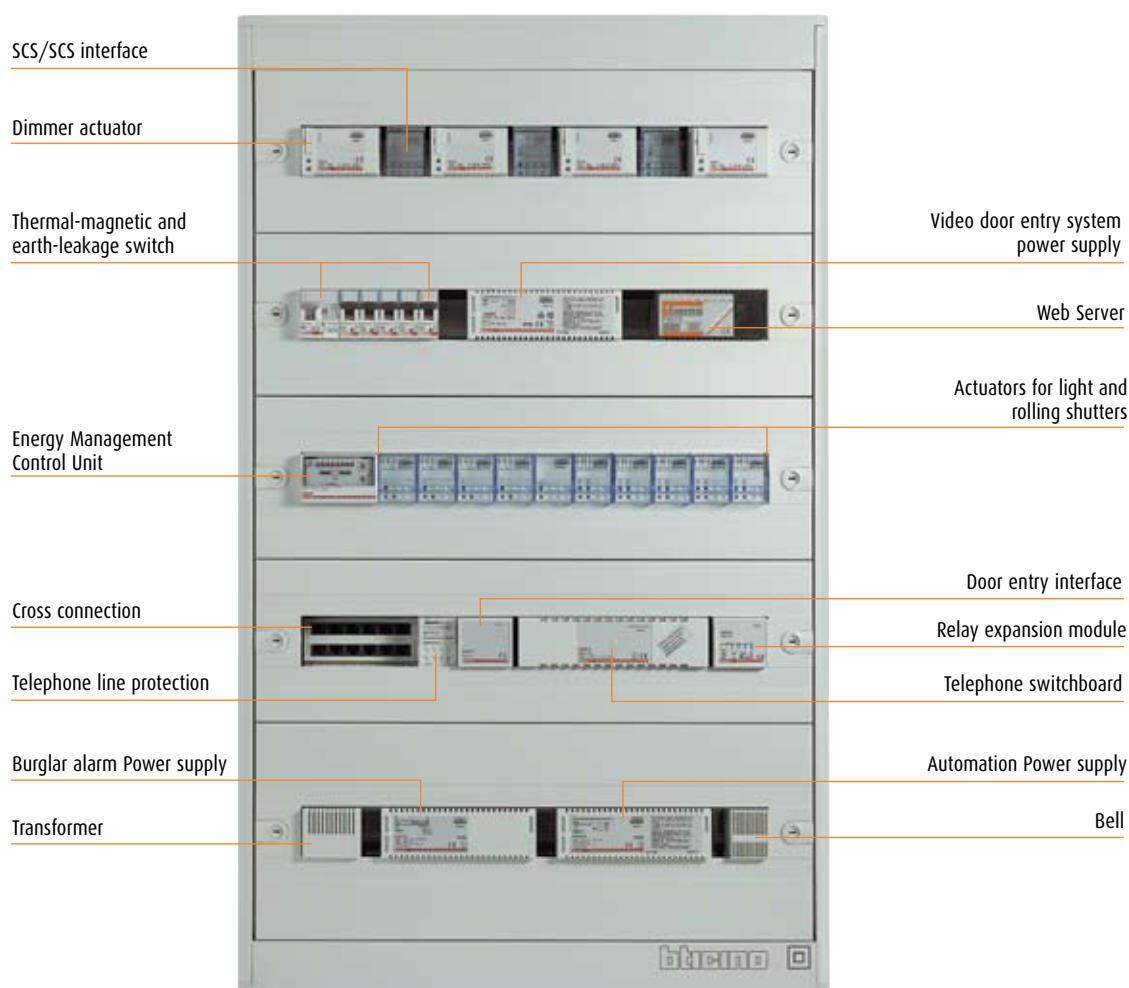
THE SWITCHBOARD OR HOUSE AUTOMATION PANEL

Regardless of the type of wiring used, star or free, combining the various MY HOME systems in the building involves the need to group together in a single central point all those active (power supplies, interfaces, telephone switchboards etc.) or passive devices which are involved in checking and managing all the functions.

This point in effect forms the “brain” of the whole building house-automation system and must be sized taking account of the following general rules:

- provide extra space to allow the installation of further equipment required by new and different requirements.
- whenever power supplies are used, these must be installed in the lowest position of the switchboard for easier dissipation of heat.
- select the switchboard which can dissipate a power greater than the sum of the powers dissipated by all the devices which must be installed.

For further information see the “Multimedia wiring” section as well.



Example of a technological cubicle made with 120-DIN module tiboard switchboard.

HOUSE-AUTOMATION PANEL ACCESSORIES















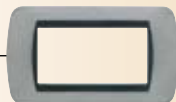


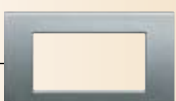



The house-automation panel accessories allow a rational arrangement in small spaces of the devices necessary to make a My Home system. With these components, among other things DIN devices can be positioned one on top of the other, or components not in DIN modularity, such as WEB SERVER, MH ROUTER etc., can be easily fastened.

Range of accessories:

- fastening clamps item F496/FF
- fastening clips on DIN rail item F496/MF
- fastening bracket on DIN rail item F496/PF for batteries, modem, router etc.
- shallow section for DIN rail item F496/PR

GENERAL RULES FOR INSTALLATION

Flush-mounting boxes and plasterboard

Boxes	Supporting frames	No. of modules	Cover plates
 PS563N (124x66x52 mm)	 L4703 with 2 screws	 3 modules	 L4803...
 503E (106x71x52 mm)	 N4703 with 2 screws	 3 modules (LIGHT - LIGHT TECH)	 N4803... - NT4803...
	 N4719 with 2 screws	 2 modules (LIGHT - LIGHT TECH)	 N4819... - NT4819...
 504E (130x71x52 mm)	 L4704 with 2 screws	 4 modules	 L4804...
	 N4704N with 2 screws	 4 modules (LIGHT - LIGHT TECH)	 N4804... - NT4804...
	 PS564N (125x68x50 mm)	 N4704 with 2 screws	 4 modules (LIGHT - LIGHT TECH)

Legend








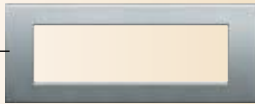

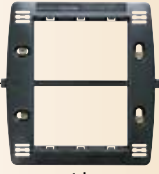








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NOTE: Complete the cover plate code with the colour abbreviation, as indicated in the BTicino Installation General Catalogue. The 503E boxes can be fitted side-by-side with the accessory Item 503ED.

GENERAL RULES FOR INSTALLATION








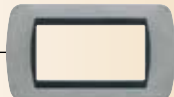








Flush-mounting boxes and plasterboard

Boxes	Supporting frames	No. of modules	Cover plates	
 PS567N (180x68x50)	 L4707 with 4 screws	 7 modules	 L4807...	
 506L (186x76x52)	 N4707 with 4 screws	 7 modules (LIGHT - LIGHT TECH)	 N4807... - NT4807...	
 506E (106x117x52)	 L4726 with 4 screws	 2 x 3 modules	 L4826...*	
	 N4726 with 4 screws	 2 x 3 modules (LIGHT - LIGHT TECH)	 N4826...* - NT4826...*	
	 L4556 loudspeaker 4070 internal siren			
	 N4556 loudspeaker N4070 internal siren			
	 NT4556 loudspeaker NT4070 internal siren			

* Complete the cover plate code with the colour abbreviation , as indicated in the BTicino Installation General Catalogue.

GENERAL RULES FOR INSTALLATION










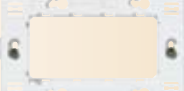

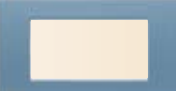


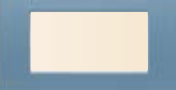






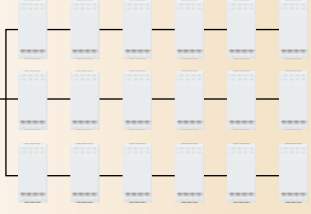
Surface-mounting boxes

Boxes	Supporting frames	No. of modules	Cover plates
 503LP (120x80x38)	 L4703 with two screws	 3 modules	 L4803...
 504LP (140x80x38)	 L4704 with two screws	 4 modules	 L4804...
 506LP (118x118x55)	 L4556 loudspeaker 4070 internal siren		
 L4714 - with supporting frame and cover plate (215x215x60)		 2 X 7 modules	
 150418GR - with supporting frames and cover plates (173x247x65)		 3 X 6 modules	
Legend			
 			

NOTE: Complete the cover plate code with the colour abbreviation, as indicated in the BTicino Installation General Catalogue. The 503E boxes can be fitted side-by-side with the accessory Item 503ED.












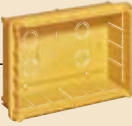



GENERAL RULES FOR INSTALLATION

Surface-mounting boxes

Boxes	Supporting frames	No. of modules	Cover plates
 503NP (114x79x46)	 N4703 with 2 screws	 3 modules (LIGHT - LIGHT TECH)	 N4803... - NT4803...
 503BP (114x79x46)	 N4719 with 2 screws	 2 modules (LIGHT - LIGHT TECH)	 N4819... - NT4819...
 504NP (136x79x46)	 N4704N with 2 screws	 4 modules (LIGHT - LIGHT TECH)	 N4804... - NT4804...
	 N4704 with 2 screws	 4 modules (LIGHT - LIGHT TECH)	 N4804... - NT4804...
 506NP (118x118x55)	 N4556 loudspeaker N4070 internal siren		
	 NT4556 loudspeaker NT4070 internal siren		
 N4714 with supporting frame and cover plate (215x215x60)		 2 x 7 modules (LIGHT - LIGHT TECH)	
 150418BA with supporting frames and cover plates (173x247x65)		 3 x 6 modules (LIGHT - LIGHT TECH)	

GENERAL RULES FOR INSTALLATION

Heights for mounting the electrical components

	265 cm	Sockets for kitchen hood and fan power supply	
	230 - 250 cm	Methane gas detectors (20 to 40 cm from ceiling)	
	more than 225 cm	Pushbuttons and pull cords for showers and baths in bathrooms Sockets for exhaust fans in bathrooms without windows Cameras	
	160 cm	Audio handsets, Video handsets, Touch Screen, Control unit with telephone dialling device	
140 CM			
		Home unit panels	
	110 cm	Commands and sockets in bathrooms and on the worktop in the kitchen	
ACCESSIBILITY OF THE ELECTRICAL COMMANDS	90 cm	Controls	
	80 cm	Commands and sockets at the bed head	
	45 cm	Plug sockets for TV, TEL, Data, HI-FI. ecc.	
			
40 CM			
MINIMUM HEIGHTS FOR COMMANDS AND SOCKETS	30 cm	junction boxes	
	17 cm	wall-mounting enclosed or protruding	
	7 cm	on trunking or skirting plinth	
	4 cm	on towers or protruding floor protection shields	


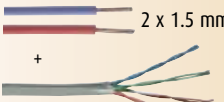
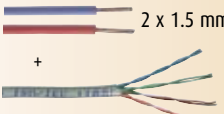







GENERAL RULES FOR INSTALLATION

Cables for wiring

SELECTION OF THE CABLE

Use the table below to choose the type of cable to use as a function of the My Home application. Remember that two or more systems with different wirings can be combined by using interface item F422. For more details

about the use of this device see the "Comfort-Automation" and "Combining the systems" chapter.

MY HOME APPLICATIONS		COMFORT				SAFETY		COMMUNICATION		CONTROL	
		Lighting	Automation	Temperature control	Sound system	Wire burglar alarm	CCTV	Video door entry system *	Integrated telephone system *	TV and data network	video Web Server
GUIDE TO CHOOSING THE CABLE											
	BTicino item 336900						■	■	■		■
	BTicino item C9881U/E						●	●			
	Multipair UTP 5						●	●			
	BTicino item L4669 (grey)	■	■	■							■
	BTicino item L4669S (red)					■					■
	Telephone pair								■		
	Traditional cables 2 x 1.5 mm ² 2 x 0.5 mm ²				■		●				
	BTicino item C9881U/E									■	
	Multipair UTP 5									■	
	BTicino item 336904				■			■			

■ Cables RECOMMENDED (conforming to installation standards)

● USABLE cables (check compliance with installation standards for each system)