SCS-SCS gateway

F422

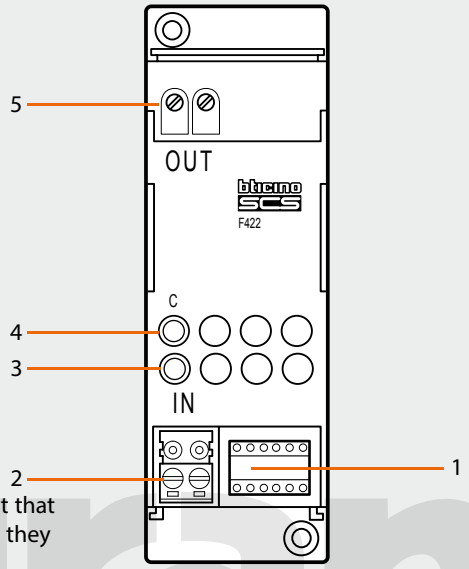
Description

The SCS/SCS gateway is an interface that provides communication among BUS systems with SCS technology, even if they perform different functions. The interface has two BUS clamps, IN and OUT.
On the front is a C key for virtual configuration and a LED for the notification of:
- correct power supply and configuration (ON steady),
- BUS not detected (OFF),
- configuration not detected or incorrect configuration (flashing).

The device may operate in four different modes:

- Physical expansion for MY HOME and Lightingh Management: can increase the total BUS length or exceed the absorption limit of 1200 mA for the individual power supply.
- Logical expansion for MY HOME: can increase the number of devices of a system, which is 81 (max 9 rooms with 9 light points each).
- Burglar alarm/automation interface for MY HOME: it allows communication between these two systems.
- Galvanic separation for MY HOME: can interface two different functions (ex.: Sound system with Automation).

NOTE: regardless of the interface mode of use, it must be taken into account that the two Buses connected constitute at all effects two systems, and, as such, they must be subjected to all existing sizing and installation rules.



Technical data

Power supply from SCS BUS:	27 Vdc
Operating power supply with SCS BUS:	18 – 27 Vdc
IN clamp absorption:	25 mA
OUT clamp absorption:	5 mA
Dissipated power with max. load:	1 W

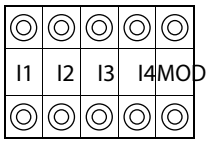
Legend

1. Configurator socket
2. BUS
3. Signalling LED
4. Pushbutton for virtual configuration
5. OUT clamp

Dimensional data

Size: 2 DIN modules

Configuration



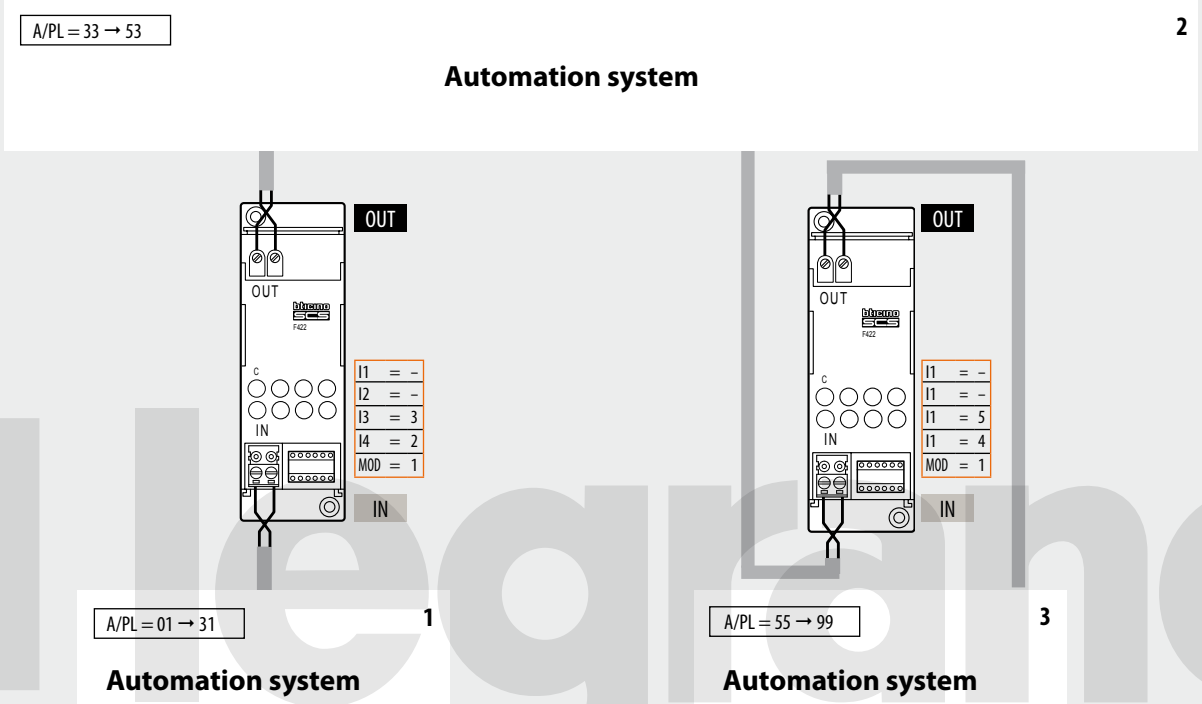
Sockets I1, I2, I3 and I4 are used to identify the interface inside the system uniquely. With actuators and controls this function is performed by the configurators in socket A and PL. In both cases configuring the device means giving it an address which identifies it.

1) Operating mode "Physical expansion" - configurare MOD = 1 -

With the interface configured in this mode, it will be possible to extend the physical limit of the maximum length of the BUS, or exceed the limit of 1200 mA delivered by the individual power supply, but not the maximum number of actuators (max. 81).
The positions identified with I1 and I2 must not be configured. The "separation address" between the two buses connected to the interface must instead be defined in positions I3 and I4. Supposing as in the example that I3=3, I4=2:

- On the input BUS (IN) the addresses must go from A=0 / PL=1 and A=3 / PL=1;
- On the output BUS (OUT) the addresses must be beween A=3 / PL=3 and A=9 / PL=9 or the address of the next interface. As it can be seen from the example, all the automation BUS 1 addresses are lower than that of the interface, while all the automation BUS 2 addresses are higher; the interface address therefore separates all the addresses of which the complete system might be made up of into two or more blocks.

Installation example



Installation rules:

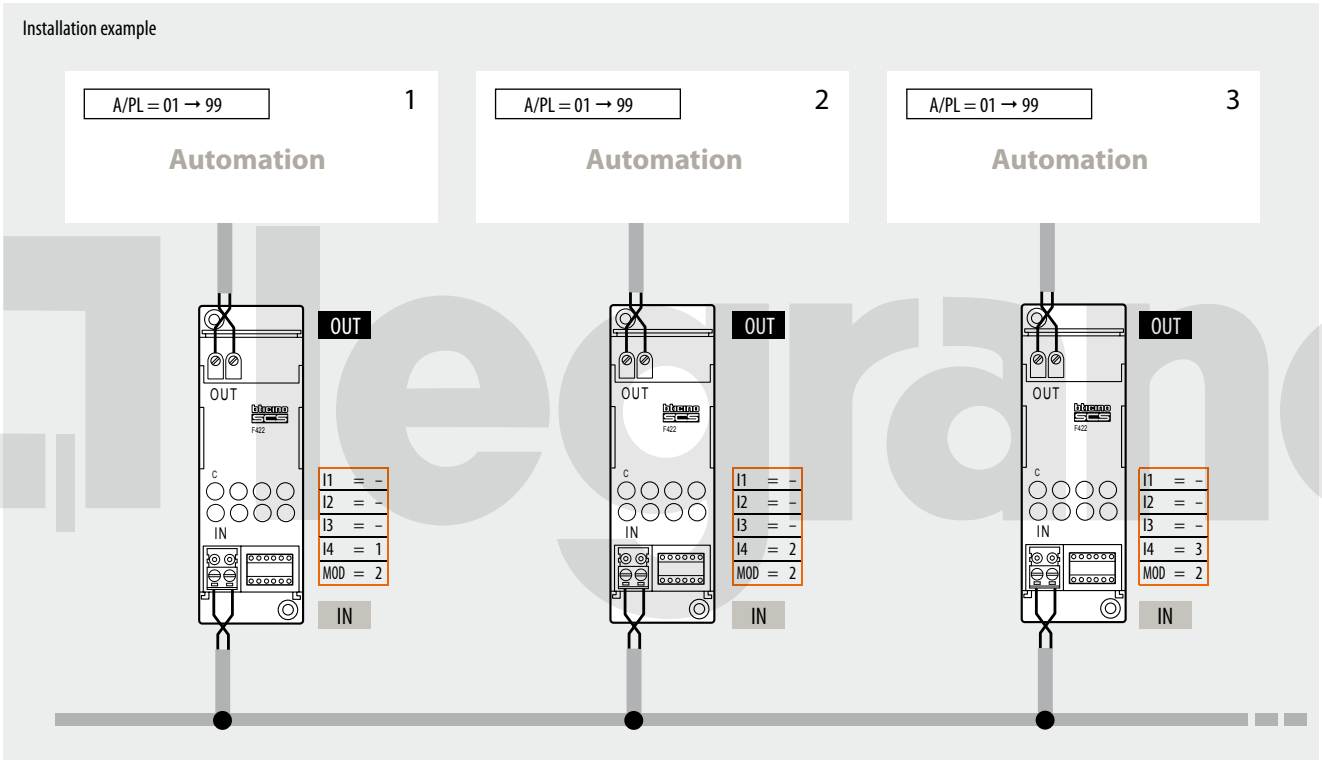
- Configure both I3 and I4 with configurators from 1 to 9, to set the separation between the two BUSES.
- I1 and I2 must not be configured.
- If several interfaces are installed in series, the addresses of the devices between one interface and the other must be within those of the two interfaces (see system example).
- In this mode, it is not possible to install two interfaces in parallel on the same BUS.
- It is possible to install up to four interfaces in series, which subdivide the system in 5 separate sections, individually powered.
- The scenario module, the memory module and the devices that can be configured in self-learning mode, must be installed on the BUS line corresponding to their own local address (for example if the scenario module is configured as A=0 / PL=1, it will have to be installed on system No. 1 – see the system example).
- All the control devices configured to send Point-point, Room, Group and General controls can be connected on either branch of the system (1 or 2) regardless of their addresses in A and PL positions.
- This is also true in the case of actuators configured in the "slave" operating mode.
- Interface item F422 allows the transit between the various systems of the Point-Point, Group, Room and General controls. As an example, install a control configured with A=1 and PL=5 in system 2 to control actuator A=1 and PL=5 installed in system 1.
- Within the system, no device must be configured with the same address as the interface.

2) "Logic expansion" operating mode - MOD = 2 configurator

This mode enables separation of control systems, with each of them therefore capable of using all the addresses available. It is therefore possible to connect several systems to an automation BUS, with each system having all the 81 addresses available. The BUS to which all others are connected therefore operates as main riser. This BUS must necessarily belong to an automation system. It is recommended that this mode is used for systems installed in large villas or in the service/industrial sector.

A typical example may be a large villa on several floors: A system may be installed for each floor, all connected to each other through another system operating as a riser.
The positions identified with I1, I2 and I3 must not be configured, while in the I4 position, the address of the interface (I4 from 1 to 9) connected to the riser must be configured.

Installation example



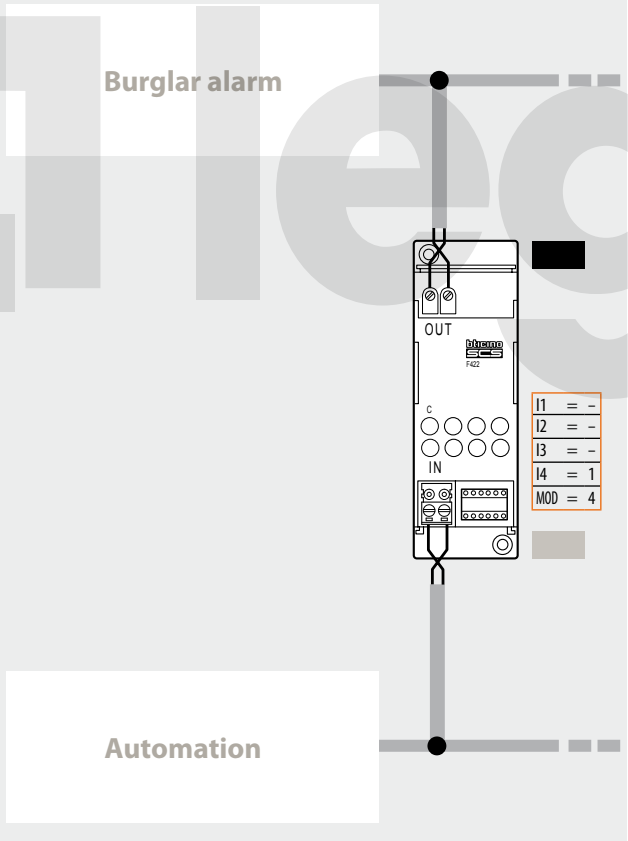
Installation rules:

- Configure I4 to give a number from 1 to 9 to the Buses connected to the riser.
- I1, I2 and I3 must not be configured.
- The BUS of the individual system connected to the main riser must be connected to the OUT clamp of the interface.
- The main riser must consist of an Automation system in which, in addition to the corresponding control devices and actuators, it will also be possible to install the Energy management central unit, temperature central unit, and the MH200 scenario programmer.
- In this mode up to nine interfaces may be connected to the main riser; it is possible to manage up to ten systems as if they were a single one. Each system connected to the riser can have all 81 addresses allowed.
- From the main riser (IN clamp), arrive the general controls (rolling shutters and lights), group controls (this allows a minimum centralisation of the controls, using standard devices of the control system), and power management controls (to allow positioning of the power management central unit on the riser). On the other hand, point-point controls are stopped by the interface, and therefore remain inside the individual system, including the riser. The controls of all systems other than automation, including AUXILIARY controls, travel in the two directions without any processing. In order to send controls from one system to the other, the special controls H4651M2, L4651M2 and AM5831M2 may be used in extended control mode.
- The interface address cannot be the same as that of other devices (e.g. configure the interface I1= -, 12= -, 13= -, I4=1 and MOD = 2, if a scenario module is configured with A = - and PL = 1).

3) "Burglar alarm/automation interface" mode- MOD = 4 configurator -

This mode can be used to interface the Automation system to the burglar alarm system, to facilitate interaction and exchange of information between the two BUS. Thanks to this function, it is possible to remotely control the automation system using the telephone communicator. The positions identified with I1, I2 and I3 must not be configured, while in the I4 position, the address of the interface (I4 from 1 to 9) must be configured.

Installation example



Installation rules:

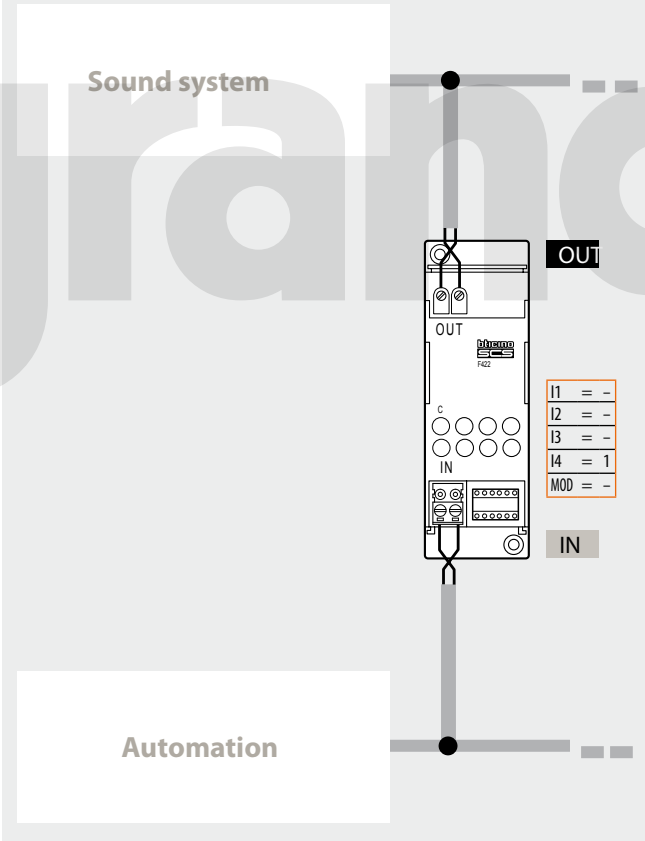
- Configure I4 with configurators from 1 to 9.
- I1, I2 and I3 must not be configured.
- The BUS of the Burglar Alarm system must be connected to the OUT clamp of the interface.
- It is not possible to connect other interfaces to the Burglar Alarm system, to physically extend the BUS, or to increase the maximum number of devices.
- Only one interface may be connected to the Burglar Alarm system. It is therefore not possible to connect together two Automation systems through the Burglar Alarm system.
- Installation of the Automation system actuators within the Burglar Alarm system is not allowed.

4) Operating mode "Galvanic separation" - configurator MOD = no configuration

This configuration enables keeping the power supplies of the two buses separate, allowing interfacing of different MY HOME functions (e.g. sound system and automation). In some cases, the use of this interface is necessary (for example when the sound system is installed). In other cases installation alternatives are possible; for example, it will be possible (but not compulsory) to install Temperature Control on a separate BUS, and interface it with Automation using an interface in Galvanic Separation mode.

The positions identified with I1, I2 and I3 must not be configured, while in the I4 position, the address of the interface (I4 from 1 to 9) must be configured.

Installation example



Installation rules:

- Configure I4 with configurators from 1 to 9.
- I1, I2 and I3 must not be configured.
- The Automation BUS must be connected to the IN clamp. The other systems must be connected to the OUT clamp (e.g. Sound System).
- It is not possible to connect several Automation systems to the same Sound System.
- Thanks to this mode, using the Web Server A/V it is possible to control a one-family system (a video door entry system and an Automation system, at the most subdivided into lines, following the physical and/or logic expansion mode procedure).

5) Use of interfaces with different modes

For home automation systems of a certain complexity, several systems may be integrated with interfaces configured in different modes. For example, it is possible to install a system with three interfaces in "logic expansion" mode, to connect three Automation systems to the same riser.

If necessary, each one of these may be extended (physical expansion mode), or interfaced to the Burglar Alarm, Video door entry or Sound systems, using other interfaces.
For example, in case of a villa consisting of several large floors.

Installation example