EN20





BES, Ingenium's KNX commitment





Ingenium HQ in Asturias, Spain.

BES, Ingenium's KNX commitment

After more than two decades of activity, **Ingenium** continues with its activity of **development**, **design and manufacturing** home automation solutions, and 100% of this activity is carried out at the headquarters of **Asturias**, **Spain**. All this time has served to strengthen the Ingenium product line based on **BUSing** protocol, as well as to complement **Wings** wireless range, which allows extending any wired **BUSing** installation. Also, for more than 14 years, **BES KNX** product line continues to evolve, and in this catalog all the information of the **BES** material based on the **KNX** standard is provided.

BES KNX line of solutions maintains its growth, complementing some product families, and improving others until it reaches a very complete and balanced catalog with the intention of covering all types of home automation installations which require KNX solutions. To this must be added, a **new online tool** that Ingenium launched at the beginning of the year for the **design and customization** of **CUBIK** buttons in a very simple and intuitive way, allowing any user profile to complete their own creations. Without a doubt, the best way to adapt the designs of the **BES capacitive pushbuttons** to the needs of each project.

In this new edition of **BES KNX** catalog, version 2020, stands out as a great novelty **VIIP**, the new color capacitive touch screen with **SIP** communications support, which in addition to video intercom functions, has a **KNX** control integrated natively. On the other hand, the family of products for **climate control** continues to grow with the arrival of two new KNX integration **gateways** with **Panasonic and Midea AC** brands. To all this, a new version of the infrared emitting device is also added, with the main and novel feature of being **bidirectional** being able to receive orders from IR side, and convert them into KNX telegrams.

Ingenium continues betting and investing in maintaining its identity, improving its headquarters facilities in Asturias, and their productive capacity. This allows to continue maintaining the high level of **design**, **development and manufacturing**, without a doubt, pillars on which the company's activity is based. It is this will to innovate, without neglecting the manufacturing process, that gives the trust of customers and makes every year, more users approach **BES**.







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CAPACITIVE

Cubik V8 Cubik V6 Cubik SQ6 Cubik SQ4 Cubik SQ2 Cubik T Cubik TH Cubik TL



PUSH-BUTTONS

A LED light indicator is associated with

There are two sizes depending on the model: square format and vertical rectangular format.

They incorporate built-in temperature and humidity sensors capable of sending the





CUBIK V8

Capacitive push-button with 8 independent touch areas, completely programmable. LED indicator associated with each touch area.

Vertical rectangular format. Mounting on universal mechanism box.

Built-in temperature sensor with PI thermostat for better energy efficiency and comfort. On/Off, PWM or continuous temperature controller for main heat/cool system and additional.

Buil-in humidity sensor with dew point measurement according to relative humidity and temperature.

> Arithmetic Logic Unit and timers/counters.





Capacitive push-button with 6 independent touch areas, completely programmable. LED indicator associated with each touch area.

Vertical rectangular format. Mounting on universal mechanism box.

Built-in temperature sensor with PI thermostat for better energy efficiency and comfort. On/Off, PWM or continuous temperature controller for main heat/cool system and additional.

Buil-in humidity sensor with dew point measurement according to relative humidity and temperature.

> Arithmetic Logic Unit and timers/counters.



CUBIK SQ6



Capacitive push-button with 6 independent touch areas, completely programmable. LED indicator associated with each touch area.

Square format. Mounting on universal mechanism box.

Built-in temperature sensor with PI thermostat for better energy efficiency and comfort. On/Off, PWM or continuous temperature controller for main heat/cool system and additional.

Buil-in humidity sensor with dew point measurement according to relative humidity and temperature.

> Arithmetic Logic Unit and timers/counters.



Capacitive push-button with 4

Square format. Mounting on universal mechanism box.

Built-in temperature sensor with PI thermostat for better energy efficiency and comfort. On/Off, PWM or continuous temperature controller for main heat/cool system and additional.

Buil-in humidity sensor with dew point measurement according to relative humidity and temperature.

> Arithmetic Logic Unit and timers/counters.

Basic	White: PL128100	White: PL126100	White: PL116100	White: PL114100	White: PL112100
Front glass fixed, white or black.	Black: PL128200	Black: PL126200	Black: PL116200	Black: PL114200	Black: PL112200
Design	White: PL228100	White: PL226100	White: PL216100	White: PL214100	White: PL212100
Front glass fixed, print customizable.	Black: PL228200	Black: PL226200	Black: PL216200	Black: PL214200	Black: PL212200
Capriccio	White: PL328100	White: PL326100	White: PL316100	White: PL314100	White: PL312100
Front glass interchangeable,	Black: PL328200	Black: PL326200	Black: PL316200	Black: PL314200	Black: PL312200





CUBIK SQ4



independent touch areas, completely programmable. LED indicator associated with each touch area.







Capacitive push-button with 2 independent touch areas, completely programmable. LED indicator associated with each touch area.

Square format. Mounting on universal mechanism box.

Built-in temperature sensor with PI thermostat for better energy efficiency and comfort. On/Off, PWM or continuous temperature controller for main heat/cool system and additional.

Buil-in humidity sensor with dew point measurement according to relative humidity and temperature.

> Arithmetic Logic Unit and timers/counters.



THERMOSTATS

With or without graphical interface. They include temperature and humidity sensors.

CUBIK Capriccio SQ: GL310000 CUBIK Capriccio V: GL320000





CUBIK-T / CUBIK-TH

Thermostat for temperature control of

one independent air conditioning area.

Includes PI regulator for controlling temperature with higher accuracy for better energy efficiency and comfort

On/Off, PWM or continuous temperature controller for main and additional heat/cool system.

Easy Logic Unit.

CUBIK-TH includes humidity sensor. Dew point measurement according to relative humidity and temperature.

Thermostat with LED indicators for the control of one air conditioning area.

CUBIK-TL

Eight completely programmable independent touch areas.

Includes a discretized PI regulator to achieve greater comfort and energy savings.

Built-in humidity sensor.

Dew point measurement according to relative humidity and temperature.

> Arithmetic Logic Unit and timers/counters.

Basic	White: SR591110 / SR591310	White: SR591210
Front glass fixed, white or black.	Black: SR591120 / SR591320	Black: SR591220
Design	White: SR592110 / SR592310	White: SR592210
Front glass fixed, print customizable.	Black: SR592120 / SR592320	Black: SR592220
Capriccio	White: SR593110 / SR593310	White: SR593210
Front glass interchangeable, print customizable.	Black: SR593120 / SR593320	Black: SR593220



And for a hotel room?

Discover our CUBIK series for hotels on page 57.





Choose your background images





> Select and edit your icons

H Entrance Corridor Down Floor heating





⇒ Add your logo

Design tool:



... and much more

Customize 100% your Cubik with our online tool https://cubik.besknx.com/

Dell



Color capacitive touch screen with SIP video intercom support





Color capacitive touch screen with SIP video intercom support that also includes monitoring and control of a KNX installation. Available in 7,1" and 10,1".

Possibility of call forwarding to mobile.

Incorporates web server for remote control from the free Ingenium Apps for iOS or Android.

It allows programming scenes and annual timed events, alarm emails sending, push notifications, etc.

Supports arithmetic and logic unit and scripting. Supports for technical alarms.

Compatible with Google Home and Alexa.

7,1" Version

White: DS171100 Black: DS171200











10,1" Version

White: DS111100 Black: DS111200



SmartTouch-K PLUS



4.3" multifunction button panel for controlling and monitoring a KNX installation.

Web server for remote control from Ingenium free apps (iOS or Android).

32 control icons distributed in 4 pages. Logical unit and scripts included. Fully customizable appearance by software. In-built temperature sensor with thermostat. Technical alarms support.

White: DS343100

Black: DS343200

White mounting box: DS940100

Black mounting box: DS940200



SmartTouch-K BASIC



4.3" multifunction button panel for controlling and monitoring a KNX installation.

Local control from Ingenium free apps (iOS or Android).

32 control icons distributed in 4 pages.

Logical unit and scripts included.

Fully customizable appearance by software.

In-built temperature sensor with thermostat.

White: DS342100 Black: DS342200

White mounting box: DS940100 Black mounting box: DS940200







4.3", 7,1" or 10,4" color capacitive touch screen for controlling and monitoring the devices of a KNX installation.
Web server for remote control from Ingenium free apps (iOS, or Android).
User can program scenes and annual schedules, email sending with alarm messages, display of IP cameras, etc.
Schedules can be programmed taking an astronomical clock as a reference.
Logical unit included.

Wifi connection and free updating from Internet.



ETHBUS-K



Web server for remote control from Ingenium free apps (iOS or Android) and from a web browser.

User can program scenes and annual schedules, email sending with alarm messages, display of IP cameras, etc.

Schedules can be programmed taking an astronomical clock as a reference.

Logical unit included.

Ethernet and Wifi connection, and free updating from Internet.

DS202000

4,3" Version7,1" Version10,4" VersionWhite: DS241100White: DS271100White: DS211100Black: DS241200Black: DS271200Black: DS211200White mounting box: DS940100White mounting box: DS970100Black mounting box: DS940200Black mounting box: DS940200Black mounting box: DS970200





KNX vertical thermostat, with large touch area and integrated 2.8" screen to manage an independent climate zone. It includes speed control, modes, measured temperature, setpoint temperature, etc.

Supports weekly timings for thermostat configuration. In-built temperature sensor with thermostat.

Menu with options for themes of appearance, brightness, language, etc.

It incorporates PI automatic regulation algorithms to control the temperature with greater precision, improving comfort and energy saving.

On/Off, PWM or continuous temperature controller, which allows control of the main and additional cold / heat systems.

Arithmetic logical unit and timers.

Basic	White: DS421100
	Black: DS421200
Design	White: DS422100
	Black: DS422200
Whit	e mounting box: DS940100
Black	k mounting box: DS940200



INPUTS* OUTPUTS



6E4S-K-30A 7S-K 9S-K 16S-K 22S-K



2E2S-K



Binary actuator with 2 potential-free relay outputs with a cutting power of 16A @ 230V each one.

Multifunction programming. Outputs work simultaneously or independently in different modes (binary outputs, blinds, etc.).

2 low-voltage digital inputs for connecting conventional pushbuttons or switches.

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.



3E2S-K



Binary actuator with 2 potential-free relay outputs with a cutting power of 16A @ 230V each one.

Multifunction programming. Outputs work simultaneously or independently in different modes (binary outputs, blinds, etc.).

3 low-voltage digital inputs for connecting conventional pushbuttons or switches.

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.



4E-K



4 low-voltage digital inputs for connecting conventional pushbuttons or switches.

Programmable inputs for working simultaneously or independently in different modes (binary inputs, blinds, dimmers, etc).

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.

CT454020

CT422220

CT423220

20





4E4SL-K



Binary actuator with 4 SELV outputs for the control of 5Vdc signalling LEDs.

4 low-voltage digital inputs for connecting conventional pushbuttons or switches.

Inputs work simultaneously or independently in different modes (binary outputs, blinds,dimmers, etc.).

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.







Binary actuator with 4 potential-free relay outputs with a cutting power of 16A or 30A @ 230V each one.

Multifunction programming. Outputs work simultaneously or independently in different modes (binary outputs, blinds, fan-coil, etc.).

6 low-voltage digital inputs for connecting conventional pushbuttons or switches.

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.

CT454420

16 amps: 6E4S-K-16A

CT416420

Manual control: CT416440

30 amps: 6E4S-K-30A*

CT416430

* This reference allows manual control.











- KNX climate zone actuator with 7 outputs (18V DC)
- Device for controlling motorized grilles to zoning the air conditioning of a KNX installation.
- It has 7 independent channels, corresponding to each zone/grill.
 - Arithmetic-logic unit and timers/counters.
 - Programming by ETS parameter application.





Binary actuator with 9 potential-free relay outputs with a cutting power of 16A @ 230V each one.

Multifunction programming. Outputs work simultaneously or independently in different modes (binary outputs, blinds, fan-coil, etc.).

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.

16S-K



Binary actuator with 16 potential-free relay outputs with a cutting power of 16A @ 230V each one.

Multifunction programming. Outputs work simultaneously or independently in different modes (binary outputs, blinds, fan-coil, etc.).

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.

CT430720

CT430920

Manual control: CT430940

CT431620

Manual control: CT431640







Binary actuator with 22 potential-free relay outputs with a cutting power of 16A 0 230V each one.

Multifunction programming. Outputs work simultaneously or independently in different modes (binary outputs, blinds, fan-coil, etc.).

Arithmetic-logic unit and timers/counters.

Programming by ETS parameter application.

\sim	172220	
	432220	

Manual control: CT432240

RKU1S200 RKU2S200 RKU3S200 RK0104C RK1103C RK1102C

t)





Universal dimmers

0-10V











RKU1S200



1 channel universal dimmer.

200W maximum output power.

Suitable for all types of lighting: incandescent, halogen or LED.

Easy and functional configuration: ramps, staircase timers, scenes, etc.

> Built-in mounting in universal distribution box.

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2 channel universal dimmer.

200W maximum output power for each channel.

Suitable for all types of lighting: incandescent, halogen or LED.

2 inputs for conventional pushbutton control.

Easy and functional configuration: ramps, staircase timers, scenes, etc.

RKU3S200



3 channel universal dimmer.

200W maximum output power for each channel.

Suitable for all types of lighting: incandescent, halogen or LED.

3 inputs for conventional pushbutton control.

Easy and functional configuration: ramps, staircase timers, scenes, etc.

RK0104C







4 channels dimmer.

ramps, staircase timers, scenes, etc.

Suitable for 0-10Vdc lighting control or 16 A maximum output p AC units with 0-10V interface.

Suitable for 1-10Vdc Simple and functional parameterization:

> Simple and functional ramps, staircase tim

DM470120

DM470220

DM470322

DM460400

DM4603



1-10V











3 channels dimmer.	2 channels dimmer.
num output power per channel.	1 A maximum output power per channel.
e for 1-10Vdc lighting control.	Suitable for 1-10Vdc lighting control.
nd functional parameterization: staircase timer, scenes, etc.	Simple and functional parameterization: ramps, staircase timer, scenes, etc.
	Built-in mounting, in universal distribution box or in false ceiling next to the ballast 1-10 Vdc.

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DM460200













Dimmer for RGBW LED modules (12V to 24V).

Possibility of controlling 4 monochromatic channels individually or simultaneously for RGBW.

Allows to dim brightness or choose from the whole color range with pushbuttons.

Easy configuration of up to 8 scenes and 8 color sequences.

Built-in on universal distribution box.

DMXBUS-K



Bi-directional communication gateway between KNX protocol and DMX512 protocol.

Allows to control DMX devices from the KNX system, being possible to choose between master or slave mode.

Control up to 48 DMX channels simultaneously.

Possibility to program and execute up to 8 scenes and 8 sequences.

DALIK



Gateway between KNX and DALI protocols.

DALI power source integrated.

Allows to control 64 lights and 16 groups from the KNX system.

Supports emergency lights.

Multiple functionalities for each light: dimmering, on/off, scenes, failure warnings, etc.

DM480440

GW612110

GW611100



_/			





Gateway between KNX and DALI protocols.

DALI power supply integrated.

It allows to control 3 channels and up to 64 ballasts by broadcast orders, being possible to split number of ballast per channel as interested.

Ability to configure up to 64 scenes.

3 inputs available for conventional pushbutton control.

Possibility of using it as an autonomous device.

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SIFKNX



Presence infrared detector with brightness sensor. Built-in and discreet installation with 360° detection.

2 detection channels.

Suitable for lighting control by threshold, motion detection, intrusion control, etc.

Also available in black color.



Ο White: SR510000 Black: SR510200



SIFKNX-S



Presence infrared detector with brightness sensor.

Surface installation with 360° detection.

2 detection channels.

Suitable for constant brightness control, motion detection, intrusion control, etc.

O White: SR511000





SIFLUX





Presence infrared detector with constant regulation.

Allows to keep a constant lighting level in a room, working together with a dimmer.

> Built-in and discreet installation with 360° detection.

> > 2 detection channels.

Suitable for constant brightness control, motion detection, intrusion control, etc.

Incorporates temperature sensor for additional measurement.

O White: SR530000

O White: SR531000







SIFLUX-S



Presence infrared detector with constant regulation.

Allows to keep a constant lighting level in a room, working together with a dimmer.

> Surface and discreet installation with 360° detection.

> > 2 detection channels.

Suitable for constant brightness control, motion detection, intrusion control, etc.

Incorporates temperature sensor for additional measurement.





Presence detector with radio-frequency technology for hidden installation.

360° detection through non-metallic surfaces for installation in technical and false ceilings.

Safe against sabotage and non-desired manipulation due to its hidden installation.

2 detection channels.

Suitable for lighting, motion detection, intrusion control, etc.

SR570000

CONVENTIONAL SENSORS







Infrared movement sensor 12 Vdc.

Embedded.







Requires a digital input connection (e.g. CT454020).

Surface mounted.

ING-SIF ING-DTV ING-SIN-3H



Requires 12 Vdc supply.

Requires a digital input connection (e.g CT454020).









LGAC-K



Gateway between KNX and LG HVAC protocols.

Integrates LG systems (VRV series) with the KNX system.

Possibility of controlling up to 64 interior units.

5 working modes (cooling, heating, ventilation, drying and auto).

4 fan speeds (low, medium, high and auto).

DKAC-K



Gateway between KNX protocol and Daikin air conditioning system.

Integrates an indoor Daikin climate unit with KNX system.

5 operating modes (auto, heat, cold, ventilation and dry).

3 fan speeds (low, medium, high). Includes energy saving mode.

Arithmetic-logic unit and timers/counters.

MBAC-K



Gateway between KNX protocol and Mitsubishi air conditioning system.

Integrates an indoor Mitsubishi climate unit with KNX system through CN105 connector.

5 operating modes (auto, heat, cold, ventilation and dry).

3 fan speeds (low, medium, high).

Includes energy saving mode.

Arithmetic-logic unit and timers/counters.

GW631100





MDAC-K



- Gateway between KNX protocol and Midea air conditioning system.
- Integrates an indoor Midea climate unit with KNX systems.
- 5 operating modes (auto, heat, cold, ventilation, dry).
 - 3 fan speeds (low, medium, high).

Includes energy saving mode.

Arithmetic-logic unit and timers/counters.

GW633100



GW632220





GW630100







Gateway between KNX protocol and Panasonic air conditioning system.

Integrates an indoor Panasonic climate unit with KNX systems through 2 wires with polarity connection.

5 operating modes (auto, heat, cold, ventilation, dry).

3 fan speeds (low, medium, high).

Includes energy saving mode.

Arithmetic-logic unit and timers/counters.

GW634100











KNX-Fermax



Bi-directional communication gateway between KNX protocol and Fermax Smile Dominium video intercom.

Allows to control and manage KNX devices from the Smile Dominium VDS video intercom, using a project uploaded from the SiDEKNX software.

No programming required.

Direct connection to the Fermax Smile Dominium video entry system and the KNX bus.

GW620000





Infrared transmitter with memory for 255 codes.

Substitutes the infrared remote control of any device and integrates the control in the KNX system.

> Allows to control many devices with the same transmitter.

Hidden installation in a mechanism box with a mini-jack-wire transmitter for controlling the device.

GW640000

IRKNX-BI



Bidirectional emitter and receiver of infrared codes for control of either IR devices from KNX and KNX devices from infrared devices.

Allows controlling multiple IR devices from the same equipment.

Hidden installation in mechanism box with minijack cable for controlling the device.

GW640200





energy efficiency



MET-3C 1 🕲 💊

Electric consumption meter of up to 3 channels. Possibility of establishing consumption limits. Alarm function in case of leaving the thresholds. Interference to procedures of the interfaces of Bes and Apps of Ingenium.

GW650300

MET-60A

I 🕲 🧠

Current transformer of 60A.

GW650060









17.





USB-K



USB2.0 interface device with Type B connector.

Enables a data connection between PC and KNX bus line without need for an extra application program.

Access to every bus device in the KNX bus system for commissioning, addressing, setting parameters, visualization, protocolling and diagnostics.

BD910000





Line coupler. Can be used as a line/ backbone coupler or as a line repeater in any KNX network.

Galvanic isolated data connection between two separate KNX bus lines (for both coupler and repeater function).

BD9200











IP routing & tunneling device without external power supply.

Data connection between (upper) KNXnet/IP line and (lower) TP KNX bus line.

Integrated KNX tunneling interface for commissioning, monitoring and diagnostics via ETS.

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POWER* SUPPLIES

BFK160 BFK80









PS110800		



SOLUTIONS FOR HOTEL







Complete solution to control a hotel room.

Outputs for light dimming, on/off LED and/or conventional lighting, fancoil, electrovalves and total room on/off.

Inputs for the control and management of all the outputs, as well as inputs for card reader, technical alarm sensors and magnetic door and window detectors.

Integrable device with Cubik SQ and V, and door room device Cubik-VH. Also compatible with any KNX device.

GW669900

The best solution for the hotel

Home automation solutions which make hotel management more effective and efficient. That is what BES offers in this sector. New tools that open a wide range of new functional and management possibilities, and that will facilitate the daily work.

Besides, with home automation system, greater energy savings and greater comfort for the guest are achieved.







MUR/DND device for hotel room.

Includes two icons to distinguish between "Do not disturb" and "Make up the room" modes.

Doorbell button and room number indicator added.

Without display

Design White: PL221100 Black: PL221200

- With display
- Basic White: PL122100 Black: PL122200
- Design White: PL222100 Black: PL222200







SIDEKNX - software for programming screens and web servers
 APP-iOS - App for iPhone and iPad
 APP-Android - App for Android devices
 Google Home - Voice control integration for KNX installations
 Alexa - Voice control integration for KNX installations





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This catalog is subject to changes and modifications by Ingenium S.L. Parque Tecnológico de Asturias. Parcela 50 C/ Ablanal, 17 33428, Llanera. Asturias (Spain)

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