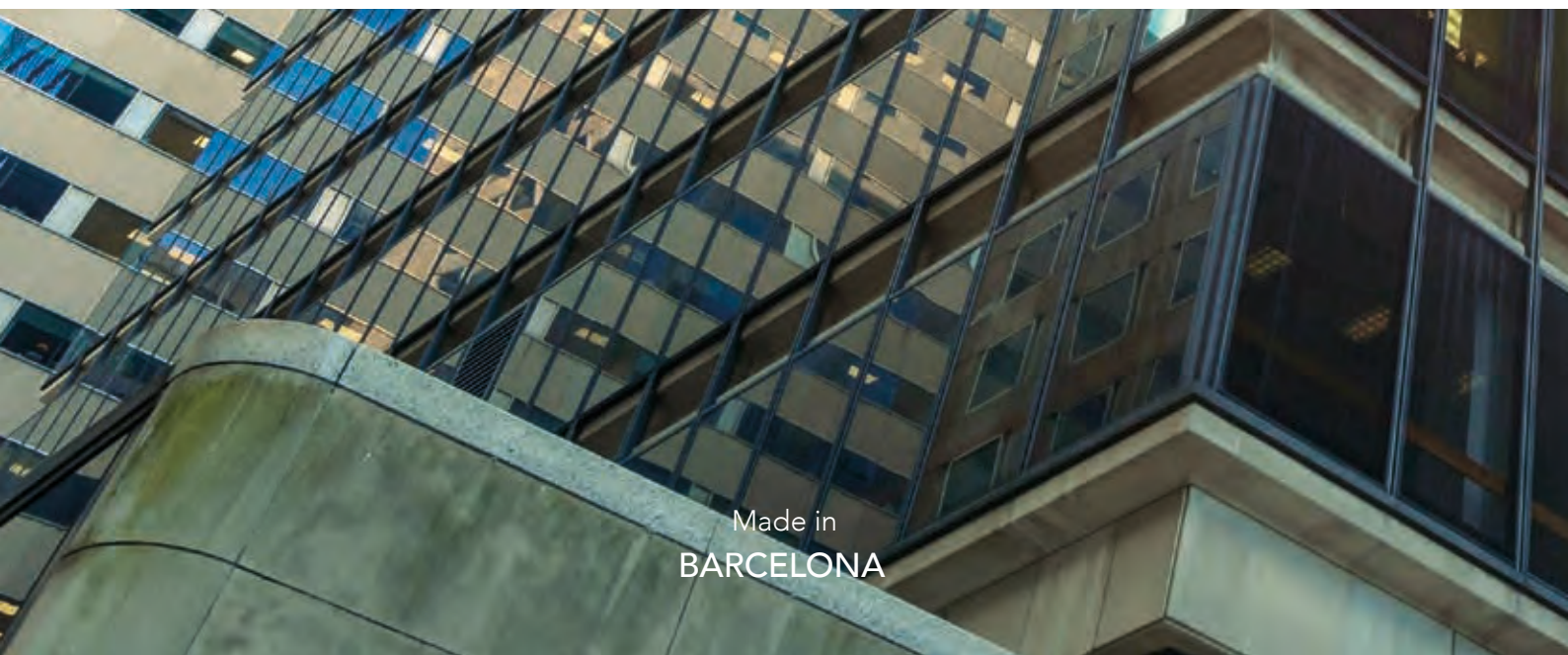
e-controls®
electronic intelligent controls, s.l.

INTERNATIONAL EDITION

PRODUCTS AND SOLUTIONS

Building automation solutions to save energy in the facilities

Nr. 10



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e-controls®
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Dear customer,

The global COVID-19 pandemic has led to the entire world reassessing life and our company is no different. During this time, multiple studies carried out by different organisations have observed a direct connection between the concentration of the COVID-19 virus and CO2 levels in a closed space, leading to the conclusion that air must be recycled and its quality measured with sensors. In this catalogue, you can see our efforts to provide new products that can help address the issues arising from this situation. They include the new family of air quality sensors **AirQualy**, which are small but powerful pieces of equipment that have up to five sensors to measure the most important parameters, such as the level of CO2, suspended particles, volatile organic compounds, temperature and humidity. In addition, they have up to five LED indicators in different colours to signal the level of each sensor, easily showing the facility's air quality. Furthermore, with the new **ETools** app, the value of each sensor can be viewed instantly using your mobile phone, while the **EConfigurator** app can be used to configure the equipment in a matter of seconds.

Another solution developed as a result of the current climate is the new family of contactless buttons **e-Touchless**, which have multiple uses in hospitals and white rooms, such as opening doors without having to physically press a mechanism or to activate lighting in an area.

I would also like to highlight our commitment to continuing to expand our range of products with communication protocols by presenting the new customisable touch keypads **e-Touch Flexi** and **e-Touch Panel**. They can control lighting, scenes and blinds with **KNX** communication, allowing us to offer the market a wide variety of solutions for these kinds of applications.

We remain faithful to our principles, designing and manufacturing our own products in Barcelona, constantly innovating and controlling production quality, day after day.

I hope you can find the answers to your projects' needs in this new catalogue. Here at E-Controls, we'd be delighted to advise you and provide the technical support you require.

Román Francesch
CEO

Open Protocol Solutions:

LONMARK®
Modbus
BACnet
DALI
M-Bus
KNX
enocean
OPC FOUNDATION MEMBER

MOST RELEVANT PROJECTS

H10 Atlantic Sunset

Tenerife, Spain

Integral room automation and BMS control

Location: Tenerife, Spain

Integral room automation and BMS control

Climate and lighting control in 310 rooms
Room occupancy with display motion sensor
BMS system for HVAC and swimming pools production plants
Products: e-Display Plus PIR, e-Room Modular,
e-Detector Noiseless, LINX, LIOB, LWEB-900

Casa Grande del Pueblo

Bolivia

Integral lighting control

Location: La Paz, Bolivia

Lighting control with DALI system

2600 units LED luminaries
28 units LDALI Gateways
460 units e-Multisensor Bus DALI for Offices
60 units Multilux DALI for Parking
7 units LVIS Touchpannel
5 units LINX-112 Automation Server

Edificio Ecofuturo

Bolivia

Lighting control

Location: La Paz, Bolivia

Constant light control with stand-alone multisensors

450 units e-Multisensor AutoDim 1-10V

Banco de España

Madrid

Lighting control

Location: Madrid, Spain

Global lighting control refurbishment

LDALI Gateways, e-Touch Flexi touch switches
e-Multisensor Bus DALI, LDALI-BM2, DALI pushbutton coupler

Casa Burés

Barcelona

Luxury apartments in the hearth of Barcelona

Location: Barcelona, Spain

Technical alarms control

26 units LVIS Touchpannel
26 units LIOB-552
104 units water detectors

Sede Central Oracle

Málaga

Lighting control

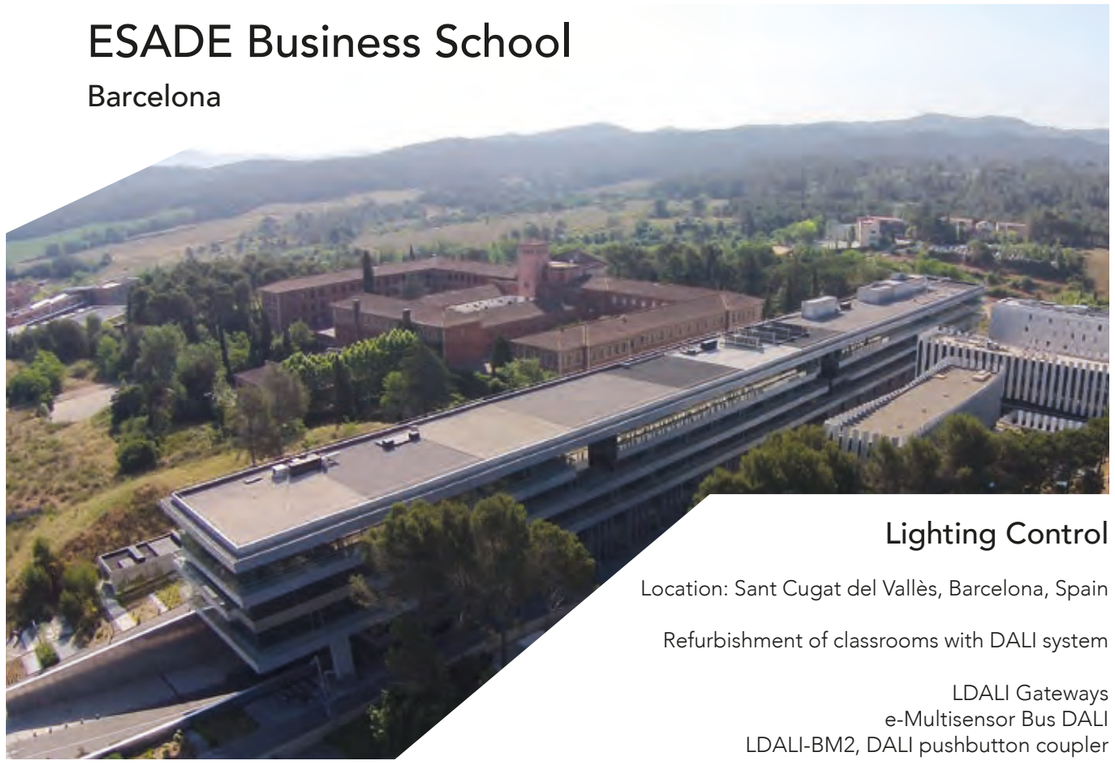
Location: Málaga, Spain

Refurbishment of lighting system

2850 LED Luminaries
Complete finished cabinets
16 units LDALI Gateway
100 units e-Multisensor Bus DALI Wide
100 units e-Multisensor Bus DALI
30 units LDALI-RM2, DALI relay output
35 units LDALI-BM2, DALI pushbutton coupler

ESADE Business School

Barcelona



Lighting Control

Location: Sant Cugat del Vallès, Barcelona, Spain

Refurbishment of classrooms with DALI system

LDALI Gateways
e-Multisensor Bus DALI
LDALI-BM2, DALI pushbutton coupler

Parador Aiguablava

Costa Brava, Girona

Lighting Control

Location: Girona, Spain

Lighting control with DALI system

LDALI Gateways
LIOB devices for outdoor lighting
e-Detector and e-Multisensor Bus DALI
LVIS Touch panels for BMS control

Hotel Royalton Bavaro Resort

Playa Bávaro

Room automation and remote room control

Location: Playa Bávaro, República Dominicana

Climate and lighting control in
800 rooms and 12 buildings

Room occupancy motion sensors
Guest Room Management System
Products: e-Display, e-Room Controller,
e-Detector Noiseless, LINX

Semark logistic food warehouse

Santander

Complete BMS warehouse control

Location: Santander, Spain

Climate and CO2 air renewal
Lighting control with DALI system
120 ut. Multilux 360 multisensors installed in freeze cabinets at +5 °C to -20 °C
LWEB-900 BMS Scada application

Lidl Warehouse

Barcelona

Complete BMS warehouse control

Location: Barcelona, Spain

Complete finished cabinets with LINX and LIOB devices for BMS control
Climate and CO2 air renewal
Lighting control with DALI system
170 ut. Multilux High Bay DALI Multisensors
7 ut. Complete finished cabinets for BMS control
Power cabinets energy monitoring

Decathlon south of Europe logistic Warehouse

Barcelona

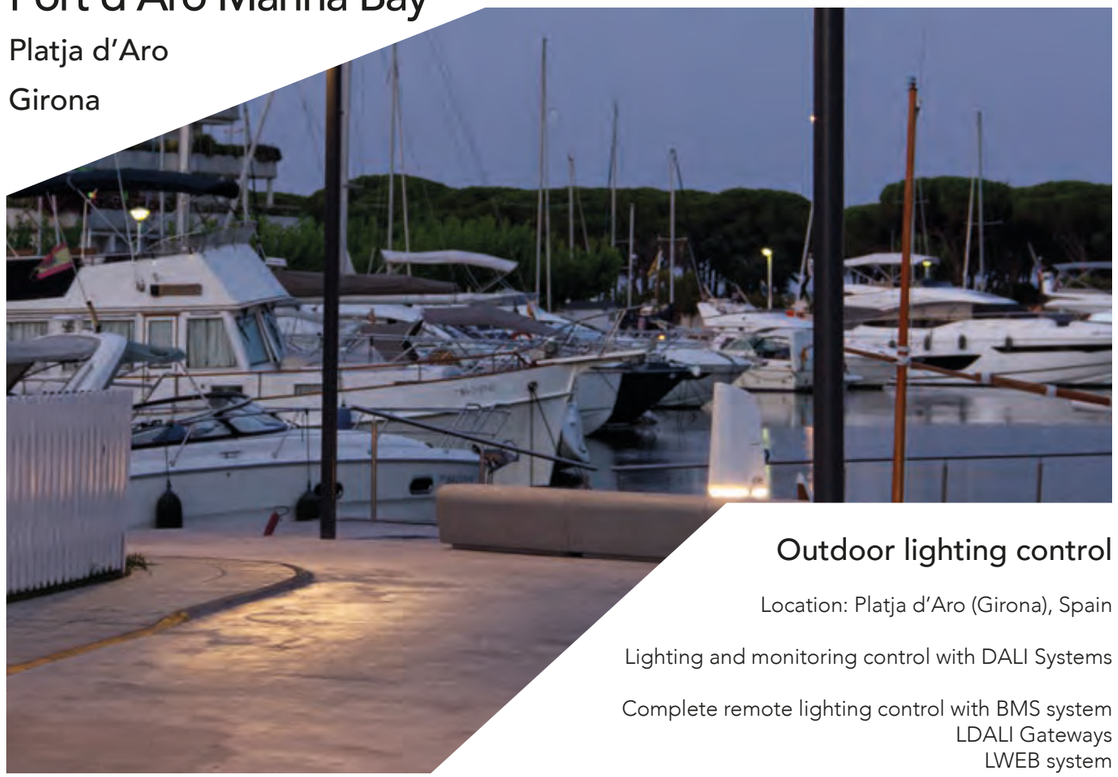
Complete BMS warehouse control and office control

95.930 m2 construction space
Climate and CO2 air renewal
Lighting control with DALI system amb BMS control
530 ut. Multilux High Bay DALI multisensors
140 ut. e-Multisensor Bus DAL Wide

Port d'Aro Marina Bay

Platja d'Aro

Girona



Courtesy: Urbidermis

Outdoor lighting control

Location: Platja d'Aro (Girona), Spain

Lighting and monitoring control with DALI Systems

Complete remote lighting control with BMS system
LDALI Gateways
LWEB system

BeCorp

Sant Just Desvern

Production plant control

Location: Sant Just Desvern (Barcelona), Spain

Overall zones lighting control with DALI
Products: e-Multisensor Bus DALI, LINX, LIOB, LDALI, LWEB-900, LVIS Touch panels

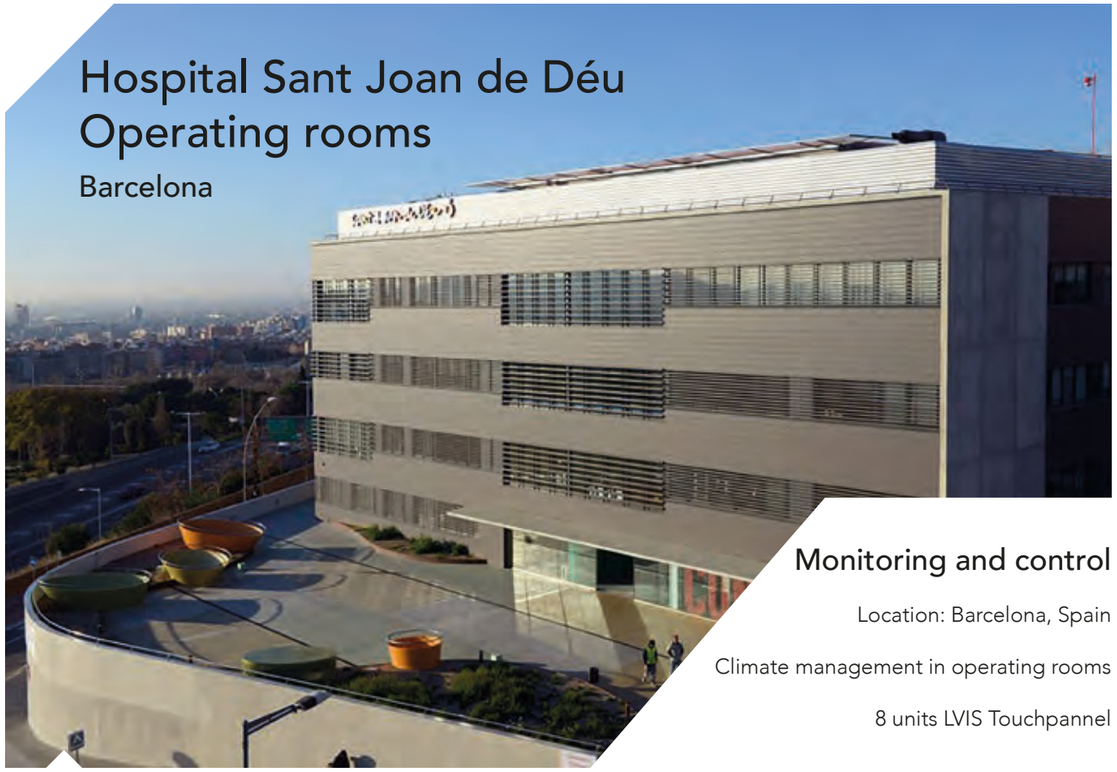
Private residence

Barcelona

Complete lighting control with DALI

Location: Barcelona, Spain

Climate control, blinds, technical alarms, energy and water monitoring
Products: e-Touch Flexi, e-Multisensor Bus DALI, e-Room Modular, e-Lighting Modular, LDALI, LINX, LVIS.



Hospital Sant Joan de Déu Operating rooms

Barcelona

Monitoring and control

Location: Barcelona, Spain

Climate management in operating rooms

8 units LVIS Touchpannel

Hospital Sant Pau

Barcelona

Climate and lighting control

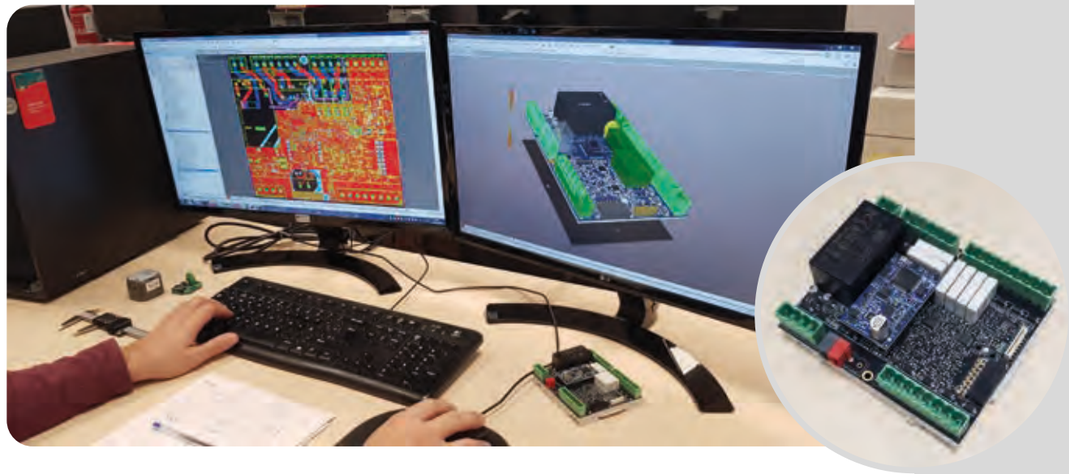
Location: Barcelona, Spain

Climate and lighting management in offices

LVIS Touchpannel
LINX-112 automation server, LIOB-452

R&D and in-house manufacturing

More tan 17 years developing our own technology
for our products

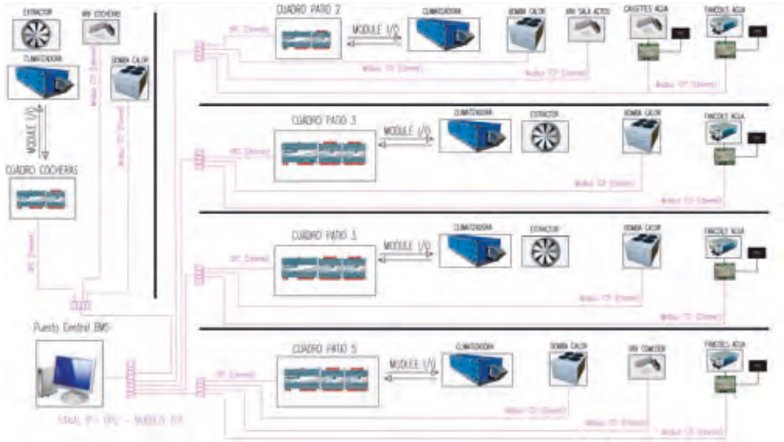


Manufacture of our products in the
factory located next to Barcelona

Service as an added value

We offer advice from start to finish, ensuring your project is a success

We provide advice on the design of BMS projects



- Definition of the best control architecture for your building
- Development of control system plans and diagrams
- Preparation of system operating reports

On-site and online technical support

- Specialist technical staff who can solve your issues
- Collaboration on project development and programming
- Project problem solving

Training, the key to improvement. Specialised training courses:

- Lighting control
- Design of BMS graphic applications
- Multi-protocol controller programming

BUILDING AUTOMATION SOLUTIONS

ETHERNET/IP ARCHITECTURE

Production plants

Reception area

Restaurants

Room control

Meeting rooms

Integration of all subsystems in a single building IP/BMS network

APPLICATIONS

Offices

Monitoring and control through secure Ethernet/IP connectivity

- Measurement of CO2, VOC, Temperature and rH levels
- Fan-Coil EC Controllers
- Air renewal with CO2 sensors
- Multisensors for lighting control
- Touch switches for scene lighting management
- Power consumption monitoring and trending
- Subsystems integration with multiprotocol gateways

e-Touch Display

e-Multisensor Bus DALI Wide

ETools APP

AirQualy

e-Touch Flexi

LINX LIOB

Hotels

Integrated control of room automation, production plant and global zones

- Room automation to reduce the energy consumption
- Room occupancy detection with motion sensors
- Measurement of CO2, PM, Temperature and Humidity in rooms and global zones
- Air Handling Units control in restaurants, meeting rooms and lobby
- Touch switches for Lighting control in meeting rooms
- Automation Servers for production plants (chillers, heaters, pumps, swimming pools)
- Multiprotocol subsystem integration: Power plant, fire protection,…

e-Touch Flexi

e-Touch Display

e-Detector Noiseless

e-Room Modular

LINX LIOB

e-Touch Panel

AirQualy

APPLICATIONS

Hospitals

Robust solutions with secure IP HTTPS connectivity for complex environments

- CO2, PM, temperature and rH measurement
- Trend registry of CO2, PM, temperature, humidity and pressure levels
- Maximum comfort with Fan-Coil EC controllers and proportional valves
- Critical alarms monitoring through touch panels
- Automatic door opening with touchless buttons

e-Room ECO Modbus

e-Touchless

Touch Panel

Schools

Easy to install and low cost stand-alone solutions

- CO2 measurement level
- CO2 visualization through LED indicators and APPs with mobile phone
- Air renewal controlled with stand-alone sensors
- Stand-Alone detectors for lighting control with DALI and 0-10V
- Easy commissioning with APPs and mobile phone

AirQualy

APP EConfigurator

e-Multisensor AutoDim DALI

Private residences

Comfort and remote control to enjoy your home

- Complete lighting control with DALI 2
- Touch switches for lighting scene management
- Blinds and lighting control from a single touch switch
- Fan-coil and radiant floor with a single controller
- Devices for technical alarm flood detection
- Pulse count detection device for water measurement

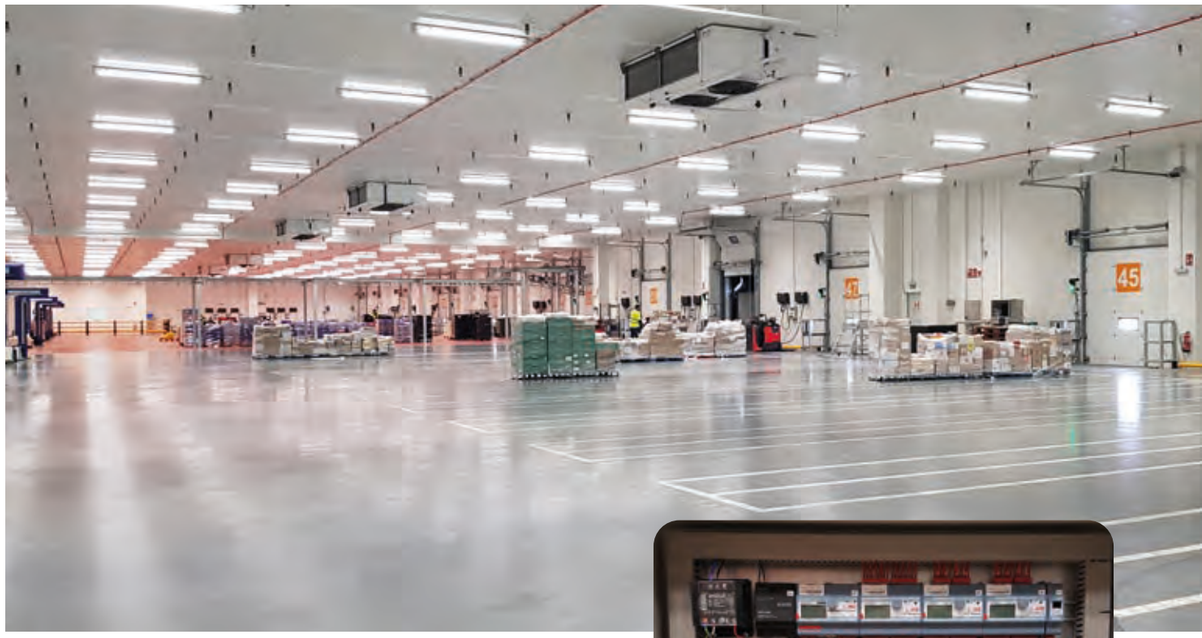
Industrial warehouses

Reliable solutions to reduce the maintenance and optimize the energy consumption

- LED luminaires dimming with high bay DALI multisensors
- CO2 measurement for air renewal control
- Energy consumption monitoring and
- Power consumption monitoring and trending
- I/O devices for technical alarms detection in cabinets
- Production plan programmable controllers: Chillers, heaters and water control
- Bus pump control and temperature manifolds measurement
- Photovoltaic plant, power plant and fire protection integration

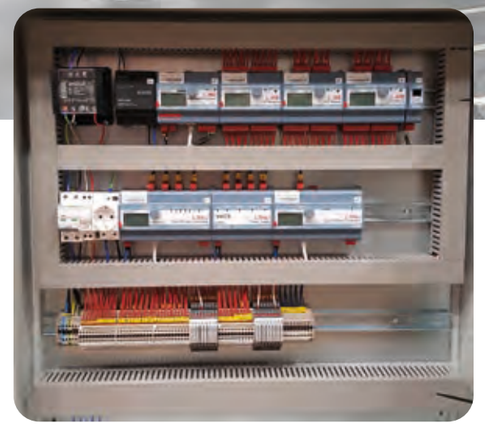
Multilux High Bay DALI

AirQualy



LINX LIOB

LDALI



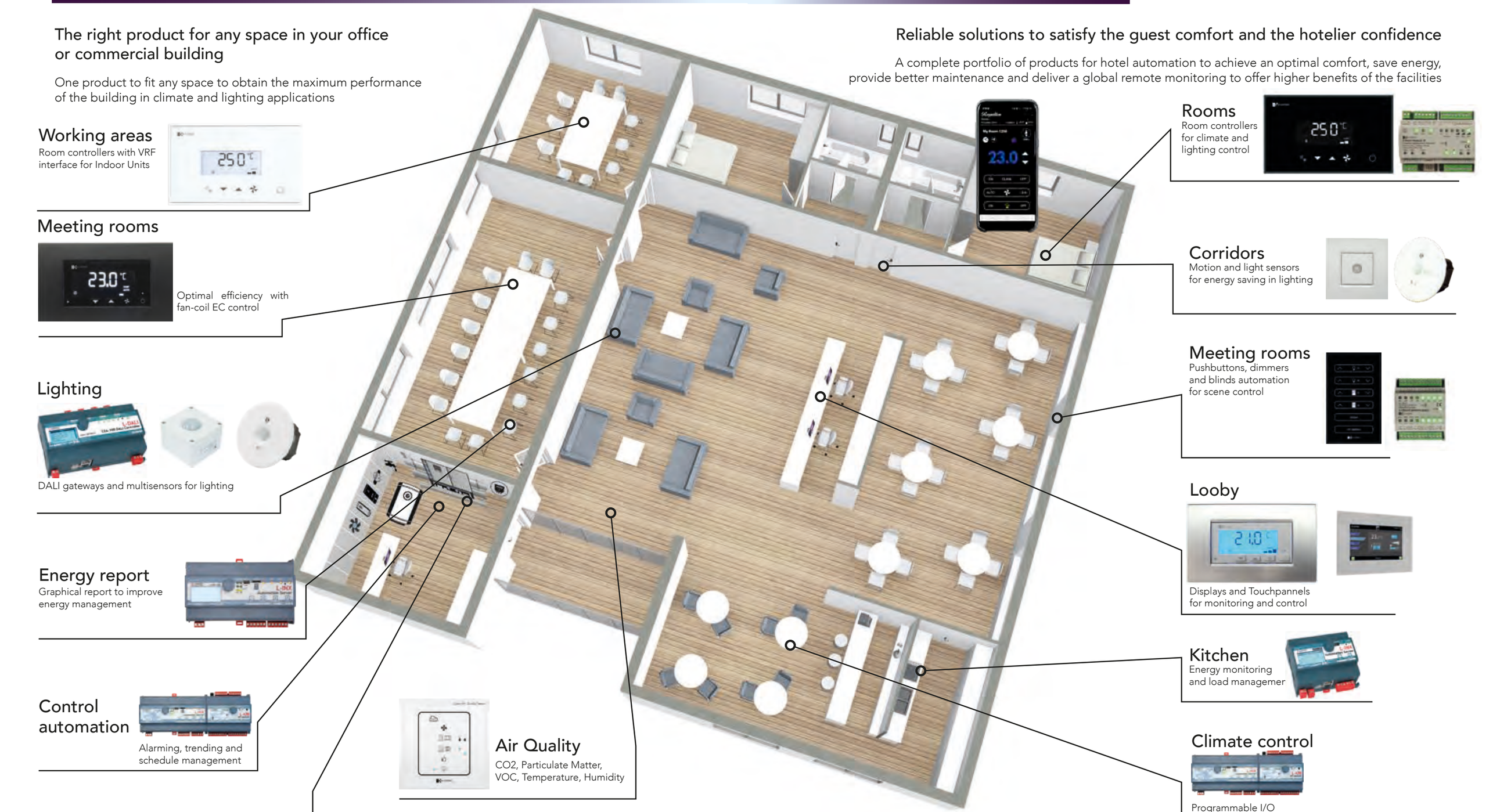
Complete finished cabinets

A PRODUCT FOR EVERY SPACE

e-controls®
electronic intelligent controls, s.l.

The right product for any space in your office or commercial building

One product to fit any space to obtain the maximum performance of the building in climate and lighting applications



Working areas
Room controllers with VRF interface for Indoor Units

Meeting rooms

Optimal efficiency with fan-coil EC control

Lighting

DALI gateways and multisensors for lighting

Energy report
Graphical report to improve energy management

Control automation

Alarming, trending and schedule management

Remote control
SCADA applications for BMS control

Air Quality
CO2, Particulate Matter, VOC, Temperature, Humidity

Internet access, alarming, scheduling, trending and e-mail reporting for high efficient control

Reliable solutions to satisfy the guest comfort and the hotelier confidence

A complete portfolio of products for hotel automation to achieve an optimal comfort, save energy, provide better maintenance and deliver a global remote monitoring to offer higher benefits of the facilities

Rooms
Room controllers for climate and lighting control

Corridors
Motion and light sensors for energy saving in lighting

Meeting rooms
Pushbuttons, dimmers and blinds automation for scene control

Looby

Displays and Touchpannels for monitoring and control

Kitchen
Energy monitoring and load managemer

Climate control

Programmable I/O devices for production plant

Our products communcates using the most important Open Standard protocols for building automation

DATASHEET

Air quality sensor for interiors

Model with LEDs to indicate the measured value

e-controls
electronic intelligent controls, s.l.

ETools APP (drawing not to scale)

AQ.014400-000

Measuring the quality of air is essential

AirQualy is a family of sensors designed to measure the quality of air in buildings. The product is available in different models which include a combination of Temperature, Humidity, CO2, Volatile Organic Compound (VOC) and Particulate Matter (PM) sensors and is available in two formats: One with LED indicators in different colours that switch on in accordance with the value measured by each sensor; and the other without LED indicators, for cases in which the purpose is to send the information to a controller or building management system (BMS).

The front panel of the unit includes an interchangeable label (E-Controls patent) with icons and texts that can be designed in accordance with the needs of each project by means of the *e-Touch Creator* web application. The product is configured by means of the EConfigurator APP with a smartphone and the information is wirelessly transferred to the unit via NFC.

The unit is made up of two elements that provide a large number of combinations and are purchased separately: The AirQualy front panel, which includes the sensors, the LEDs, the frame and a sample label; and the "e-Bus Coupling Surface" mechanism, which provides the power supply and the type of control output and is available in three models: an stand-alone model without outputs, a model with a relay output and 0-10 V / 4-20 mA outputs, and a model with Modbus communication.

Temperature, Humidity CO2, VOC and PM sensors

Option with LEDs to indicate the measurement of the sensor

ETools APP to view sensors reading

Configuration via app with NFC

Unit for surface mounting

Three coupling unit models: Stand-Alone / Relay, 0-10V and 4-20mA outputs / Modbus RTU

Front image of the unit

The unit is supplied with a label with icons to indicate the values of each sensor. Other designs can be ordered through the *e-Touch Creator* website.

Indication LEDs

The front can optionally be ordered with LEDs to indicate the measured value. The CO2, VOC and PM sensors have 5 LEDs: Blue (optimal level), Green, Yellow, Orange and Red (critical level). The temperature and humidity sensors have 3 LEDs: Green (optimal), Red (higher) and Blue (lower). All the levels can be configured with the APP.

Technical specifications

- Temperature sensor (digital)
  Measurement range: - 10 °C to 60 °C
  Accuracy: ± 0,2 °C
- Humidity sensor (digital)
  Measurement range: 0 to 100 % HR
  Accuracy: ± 1,8 % HR
- CO2 sensor
  NDIRmeasurement technology
  Measurement range: 0 to 5000 ppm
  Accuracy: ± (30 ppm + 3% m.v.)
  Stability between 0 and 50 °C: ± 2.5 ppm
- COV sensor
  MOx measurement technology
  Measurement of ethanol and toluene
  Measurement range: 0 to 1000 ppm of ethanol equivalent
  Value provided: 0 to 500 VOC points
- PM sensor
  Configurable particle measurement size: 0.3 to 1.0 µm / 2.5 µm / 4.0 µm / 10 µm
  Measurement range: 0 to 1000 µg/m3
  Resolution: 1 µg /m3
  Accuracy for PM1 and PM2.5:
  From 0 to 100 µg/m3: ± 10 µg/m3
  From 100 to 1000 µg/m3: ± 10% MV (*)
  Accuracy for PM4.0 and PM10:
  From 0 to 100 µg/m3: ± 25 µg/m3
  From 100 to 1000 µg/m3: ± 25% MV (*)
  MCERTS certificate (*) MV: measured value
- Dimensions: 86 x 86 x 22 mm (W x H x D)

Ordering numbers

AQ.00YY00-000 (see table)
AirQualy sensor without LEDs
Sensor without LEDs, frame, front label

AQ.01YY00-000 (see table)
AirQualy sensor with LEDs
Sensor with LEDs, frame, front label

e-Bus Coupling Surface
See purchase references on the product's datasheet

Accessories

AC.000040-000
Enclosure for desktop mounting

AirQualy sensor models table

Front pannels without LEDs	Front pannels with LEDs	Description	T	RH	CO2	COV	PM
AQ.001200-000	AQ.011200-000	AirQualy CO2			●		
AQ.001400-000	AQ.011400-000	AirQualy PM					●
AQ.002100-000	AQ.012100-000	AirQualy Temp + HR	●	●			
AQ.002400-000	AQ.012400-000	AirQualy CO2 + PM			●		●
AQ.003100-000	AQ.013100-000	AirQualy Temp + HR + CO2	●	●	●		
AQ.003200-000	AQ.013200-000	AirQualy Temp + HR + COV	●	●		●	
AQ.003400-000	AQ.013400-000	AirQualy Temp + HR + PM	●	●			●
AQ.004100-000	AQ.014100-000	AirQualy Temp + HR + CO2 + COV	●	●	●	●	
AQ.004400-000	AQ.014400-000	AirQualy Temp + HR + CO2 + PM	●	●	●		●
AQ.004500-000	AQ.014500-000	AirQualy Temp+HR+CO2+COV+PM	●	●	●	●	●

Examples of possible combinations

DDS0121502000-0, AQ.0XYY00-000 - AirQualy Sensor DDSEN

Example for schools

CO2 sensor model with LEDs
Stand-Alone coupling unit
Jack power supply

AQ.011200-000
BC.400000-031
FAP-12W-12V

Example for offices

T + RH + CO2 sensor model with LEDs
Coupling unit with relay, 0-10V / 4-20mA
DIN rail power supply

AQ.013100-000
BC.400201-031
FA-15W-24V

Example for BMS

T + RH + CO2 + PM model without LEDs
Modbus RTU coupling unit
DIN rail power supply

AQ.004400-000
BC.470002-031
FA-15W-24V

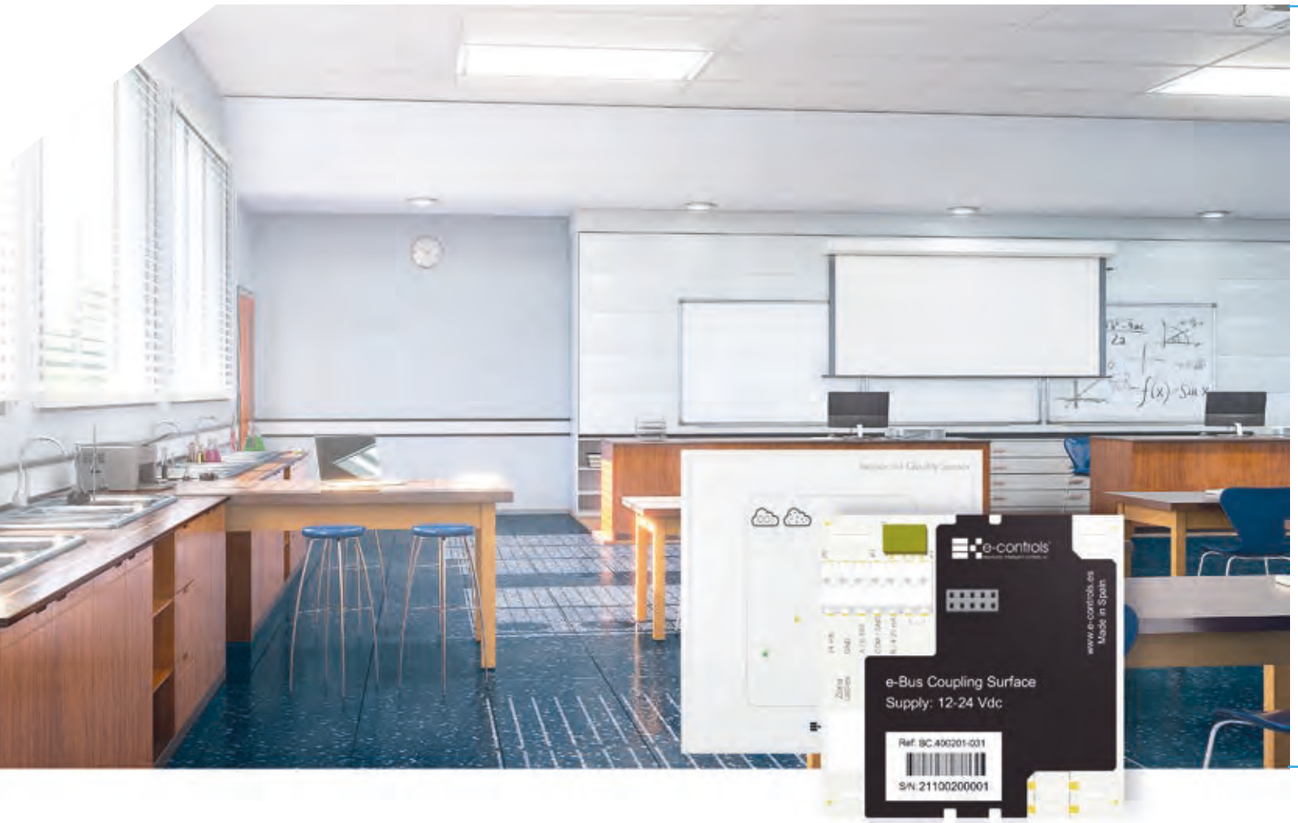
(*) The purchase order must include the ordering number of the AirQualy sensor, the ordering number of the e-Bus Coupling Surface mechanism and the ordering number of the power supply (optional).

DATASHEET

Bus coupling unit for the AirQualy sensor

Stand-alone control / Relay, 0-10 V, 4-20 mA / Modbus

e-controls
electronic intelligent controls, s.l.



BC.400201-031

AirQualy sensor mounting mechanism

e-Bus Coupling Surface is a family of smart mechanisms that are connected to **AirQualy** sensors to supply them with the power they need to operate. Depending on the model, they include a communications protocol to transmit the information to a building management system or a range of digital and analogue outputs to control an air renewal system.
There are three models to choose from in accordance with the needs of each installation:

- A stand-alone model without outputs or a communications bus, designed for AirQualy sensors with LEDs that only need a power supply to operate. The unit includes a jack connector for a power source that can be plugged into a wall socket, significantly facilitating its mounting.
- A model with a relay output for on/off control and a 0-10 V or 4-20 mA output that provides the value of any sensor or can be configured for PI control over an external unit to automate air renewal.
- A model with Modbus RTU communication (RS-485), which provides the measured value of all the sensors and has an output register that provides PI control over any sensor.

The unit is designed to be mounted on a surface, in such a way that it is not necessary to use a box for its installation, given that it can be installed on any wall or glass surface.
The unit is configured with the AirQualy sensor, using the EConfigurator smartphone APP and NFC technology to transfer the information to the unit.

Stand-alone model with jack connector for plug-in power supply

Model with relay output and configurable 0-10 V or 4-20 mA output

Model with Modbus RTU communication (RS-485)

Unit for surface mounting

Configuration with APP and NFC via the AirQualy sensor

Stand-alone model

e-Bus Coupling Surface SA is the stand-alone model designed for installations where an AirQualy sensor with LEDs is to be used.
It includes a jack connector for the plug-in power source ref. FAP-12W-12V, as well as terminals to enable connection to a DIN rail external power supply.

Model with digital and analogue outputs

e-Bus Coupling Surface 2O includes a relay output that can be associated with any sensor for on/off control from a configurable setpoint. It also has a configurable analogue output to work in 0-10 V or in 4-20 mA and can be associated with any sensor to read the measured value, or for PI control over an air-conditioning or air renewal system.
The unit is powered with a 12-24 V DC power supply and includes terminals to connect to a DIN rail external power supply (ref. FA-15W-24V).

Technical specifications of the outputs:

Potential free contact relay:
- Maximum contact voltage: 30 V DC
- Maximum contact current: 1 A

0-10 V analogue output:
- Output voltage: 0-10 V
- Maximum current: 60 mA
- Protected against overvoltage and overcurrent

4-20 mA current output:
- Output current: 4-20 mA

Model with Modbus communication

e-Bus Coupling Surface Modbus has multiple registers to configure the Modbus address, communication speed and parity, setpoints of each sensor for control, measurement levels for each LED and each sensor, output registers to show instantaneous levels and maximum/minimum levels, among others. The unit is powered with a 12-24 V DC power supply and includes terminals to connect to a DIN rail external power supply (ref. FA-15W-24V).

Modbus · 0-10V 4-20mA · CE

Ordering numbers

BC.400000-031
e-Bus Coupling Surface SA
Surface-mounted stand-alone unit
12-24 V DC power supply jack connector

BC.400201-031
e-Bus Coupling Surface 2O
Unit with 1 relay, one 0-10 V / 4-20 mA output
12-24 V DC power supply

BC.470002-031
e-Bus Coupling Surface Modbus
Unit for Modbus RTU (RS-485)
12-24 V DC power supply

Accessories

FAP-12W-12V
100-240 V AC
Plug-in power source with jack connector

FA-15W-24V
95-250 V AC / 24 V DC
DIN rail external power supply

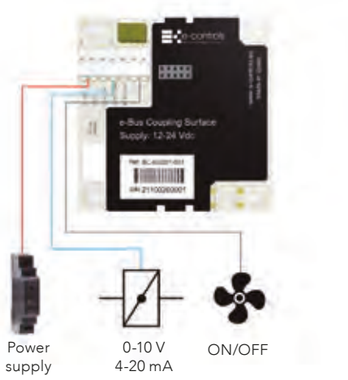
Examples of possible combinations

e-Bus Coupling Surface SA

Stand-alone model for AirQualy sensor with LEDs
Power supply jack connector

e-Bus Coupling Surface 2O

Direct control with PI algorithm
0-10 V / 4-20 mA output to read the measured value of any sensor



e-Bus Coupling Surface Modbus

Model with Modbus communication to report data to a BMS

DDS0121506000-0, BC.4XYYZZ-031 - e-Bus Coupling Surface DDSEN

e-Touch Flexi
e-Bus Coupling

PRODUCT PATENTED - e-controls

e-Touch Flexi and **e-Bus Coupling** is a new fully flexible and adaptable solution for lighting control, climate, curtains, blinds control and any other system of an installation that anyone wants to control through a touch panel.

Total integration with e-Bus Coupling

e-Bus Coupling is a multiprotocol bus coupling family products used to connect any touch panel of the e-Touch Flexi family products to do the requested control in an installation. e-Bus Coupling provides multiple standard communication protocols for the touch panels thanks to the different existing models that include the most important well known protocols for building automation. The device is installed in a universal flush mounting enclosure of 60x60.

Installation in universal enclosure (60x60)

Multiprotocol solution

Re-definible pushbuttons after installed

Text and icons interchangeable at any time

Pushbuttons design with different colours

Configuration with APP and NFC technology

Fully flexible control with e-Touch Flexi

e-Touch Flexi is a touch panel family of products with a fully customizable and configurable pushbutton design thanks to a unique patented system by E-Controls that allows to completely define the aesthetics of the pushbuttons, printing and inserting them in the panel, providing a solution that allows to re-define the panel anytime without changing it. The flexibility provided by the system allows the customer define the aesthetical design after the purchase of the panels and when the installation is completely finished, avoiding errors or delays in the panels design definition.

1

2

3

4

Buy the devices and ask for the pushbuttons at any time

Configuration using mobile APP and NFC wireless technology

NFC

Room Panels

e-Touch Flexi: Touch panels

							
Product name	e-Touch 1R-5P White	e-Touch 2RH-6P White	e-Touch 2RV-6P White	e-Touch 2R-4P White	e-Touch 3R-9P White	e-Touch 6R-12P White	e-Touch 6R-18P White
Ordering number	TP.010500-000	TP.120600-000	TP.020600-000	TP.020400-000	TP.130900-000	TP.161200-001	TP.161800-001
Frame (included)	FR.000102-000	FR.000102-000	FR.000102-000	FR.000102-000	FR.000102-000	FR.000100-001	FR.000100-001
Mounting	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling
Keypad definition							
Rows	1	2 Horizontal	2 Vertical	2	3	6	6
Pushbuttons	1	6	6	4	9	12	18
Tactile zones	5	6	6	4	9	12	18
LED indicators	1	6	2	4	9	12	18
General features							
Temperature sensor	X	X	X	X	X	X	X
Proximity sensor	X	X	X	X	X	X	X
NFC sensor	X	X	X	X	X	X	X
Colour	White	White	White	White	White	White	White
Dimensions	86x86x8,5 mm	86x86x8,5 mm	86x86x8,5 mm	86x86x8,5 mm	86x86x8,5 mm	86x142x8,5 mm	86x142x8,5 mm
Weight	60 g	60 g	60 g	60 g	60 g	95 g	95 g

e-Touch Flexi: Touch panels

							
Product name	e-Touch 1R-5P Black	e-Touch 2RH-6P Black	e-Touch 2RV-6P Black	e-Touch 2R-4P Black	e-Touch 3R-9P Black	e-Touch 6R-12P Black	e-Touch 6R-18P Black
Ordering number	TP.010502-000	TP.120602-000	TP.020602-000	TP.020402-000	TP.130902-000	TP.161202-001	TP.161802-001
Frame (included)	FR.000102-000	FR.000102-000	FR.000102-000	FR.000102-000	FR.000102-000	FR.000102-001	FR.000102-001
Mounting	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling	e-Bus Coupling
Keypad definition							
Rows	1	2 Horizontal	2 Vertical	2	3	6	6
Pushbuttons	1	6	6	4	9	12	18
Tactile zones	5	6	6	4	9	12	18
LED indicators	1	6	2	4	9	12	18
General features							
Temperature sensor	X	X	X	X	X	X	X
Proximity sensor	X	X	X	X	X	X	X
NFC sensor	X	X	X	X	X	X	X
Colour	Black	Black	Black	Black	Black	Black	Black
Dimensions	86x86x8,5 mm	86x86x8,5 mm	86x86x8,5 mm	86x86x8,5 mm	86x86x8,5 mm	86x142x8,5 mm	86x142x8,5 mm
Weight	60 g	60 g	60 g	60 g	60 g	95 g	95 g

Touch panels and bus coupling units for room automation

e-Bus Coupling: Bus coupling units with protocol

						
Product name	e-Bus Coupling KNX	e-Bus Coupling RS-485	e-Bus Coupling Modbus RTU	e-Bus Coupling DALI	e-Bus Coupling DALI Mains	e-Bus Coupling DALI Master
Ordering number	BC.090001-001	BC.672001-001	BC.672002-001	BC.080001-001	BC.582001-001	BC.581002-001
Mounting	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount
Enclosure	Universal 60x60 mm	Universal 60x60 mm	Universal 60x60 mm	Universal 60x60 mm	Universal 60x60 mm	Universal 60x60 mm
Supply Power	KNX Bus	24 Vdc	24 Vdc	16 Vdc (DALI)	95-250 Vac	95-250 Vac 50/60 Hz
Technology	KNX	Room Bus	Modbus RTU	DALI V2	DALI V2	DALI V2
Channel	TP1	RS-485	RS-485	DALI	DALI	DALI
Digital Inputs	0	2	2	0	2	0
Relay Outputs	0	0	0	0	0	0
Analog Outputs (0-10V)	0	0	0	0	0	0
General features						
Dimensions	78x78 mm	78x78 mm	78x78 mm	78x78 mm	78x78 mm	78x78 mm
Weight	52 g	70 g	70 g	70 g	70 g	70 g

e-Bus Coupling: Bus coupling units without protocol

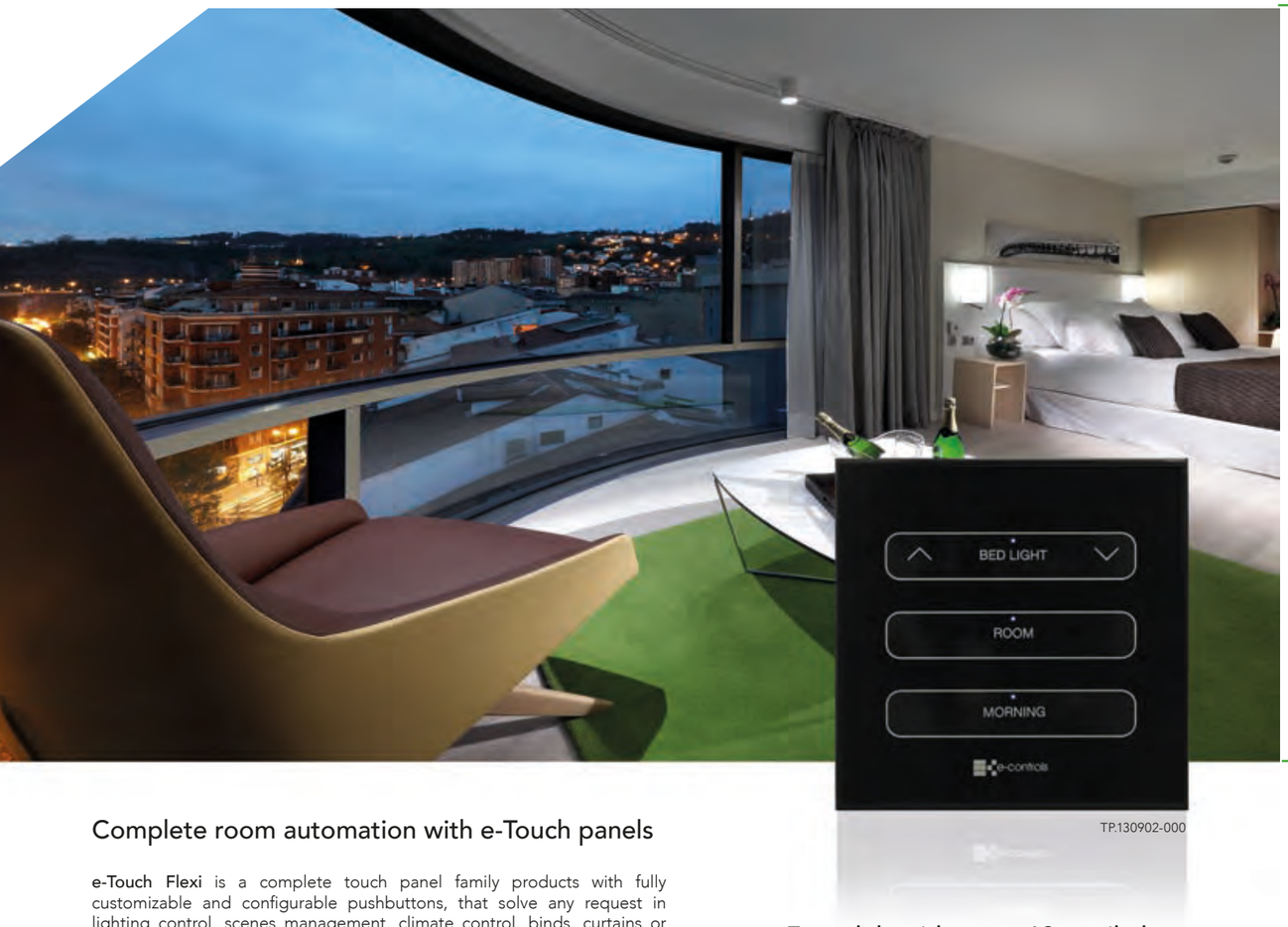
		
Product name	e-Bus Coupling OnOff	e-Bus Coupling 0-10V
Ordering number	BC.501000-001	BC.501001-001
Mounting	Flush mount	Flush mount
Enclosure	Universal 60x60 mm	Universal 60x60 mm
Supply Power	95-250 Vac	95-250 Vac
Technology	OnOff	0-10V
Channel	-	-
Digital Inputs	1	1
Relay Outputs	1	1
Analog Outputs (0-10V)	0	1
General features		
Dimensions	78x78 mm	78x78 mm
Weight	80 g	80 g

Touch panels for building management

DATASHEET

Lighting control, Climate, curtains and blinds

e-controls
electronic intelligent controls, s.l.



TP.130902-000

Complete room automation with e-Touch panels

e-Touch Flexi is a complete touch panel family products with fully customizable and configurable pushbuttons, that solve any request in lighting control, scenes management, climate control, binds, curtains or any other request for control. The touch panel is connected to an intelligent multiprotocol frame and provides the communication protocol that best fits any project.

Every panel is including a unique innovative patented solution designed by E-Controls in which the pushbuttons aesthetic are designed for every project and are printed in a special paper which is later inserted in the panel, providing a fully flexible solution of the pushbuttons definition and achieving a perfect final look and feel that perfectly fits every request. Any pushbutton can be freely defined, choosing the background colour and icons or text desired for every tactile zone. Through the E-Controls webpage it is possible to design and personalize the pushbuttons of every panel, but also to ask for the quick printing service provided by the company.

A wireless NFC sensor is also present on the device and allows exchanging information with the E-Configurator APP, to configure the device instantly, reducing the installation programming costs drastically.

A temperature sensor is also available in the device and provides the temperature of the zone. The device is also including a proximity infrared sensor to detect nearly movements to automatically switch on the device LEDs to easily track the device in dark conditions.

7 models with up to 18 tactile buttons

One LED indicator for pushbutton

Fully customizable and interchangeable pushbuttons

Connected to an intelligent e-Bus Coupling coupler

8,5 mm depth from wall

100% customizable pushbuttons

The flexible solution of customizable pushbuttons provides the ability to re-design the touch panels at any moment and at a minimum cost, because of the advantage that any pushbutton label can be changed of its original position or can be re-designed or changed any time, keeping the same device forever.

An LED signal for every pushbutton

Every pushbutton is including a blue LED indicator that can be configured to do different functions, like on/off switch with a pushbutton, scene indication or show the status of a remote output.

Automatic switch on of the LED indicators

A proximity sensor provides the option to switch on the LED indicators when a proximity movement has been detected.

Specifications

- Up to 18 tactile pushbuttons
- Blue LED indicators in every button
- Digital temperature sensor
- NFC wireless sensor
- Proximity sensor
- Connector for e-Bus Coupling
- Colours available:
  - White
  - Black
  - Customizable
- Dimensions:
  - e-Touch Flexi: 86 x 86 x 8,5 mm (W x H x D)
  - e-Touch Panel: 86 x 142 x 8,5 mm (W x H x D)

8,5 mm ultra-flat design

Ordering numbers

TP.010502-000
e-Touch Flexi 1R-5P Black
1 pushbutton, 5 touch zones, 1 LED

TP.120602-000
e-Touch Flexi 2RH-6P Black
2 horizontal rows, 6 touch zones, 6 LEDs

TP.020602-000
e-Touch Flexi 2RV-6P Black
2 vertical rows, 6 touch zones, 2 LEDs

TP.020402-000
e-Touch Flexi 2R-4P Black
2x2 pushbuttons, 4 touch zones, 4 LEDs

TP.130902-000
e-Touch Flexi 3R-9P Black
3 horizontal rows, 9 touch zones, 9 LEDs

TP.161202-001
e-Touch Panel 6R-12P Black
6 horizontal rows, 12 touch zones, 12 LEDs

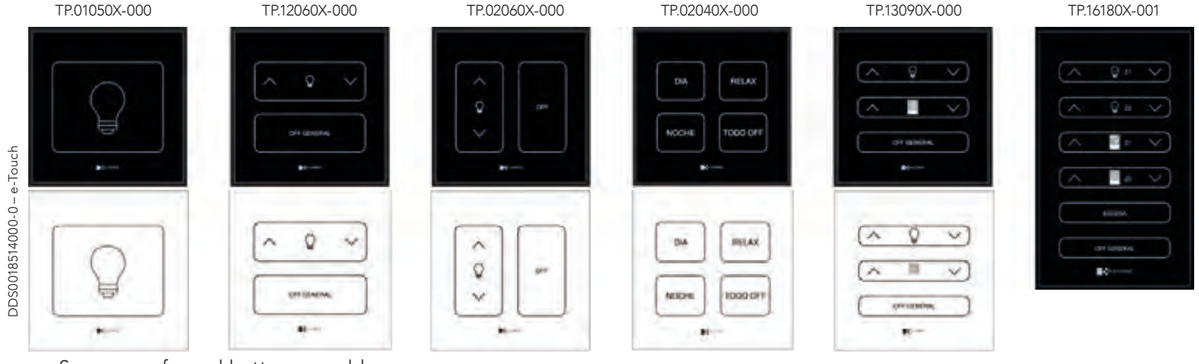
TP.161802-001
e-Touch Panel 6R-18P Black
6 horizontal rows, 18 touch zones, 18 LEDs

NOTE: Available also in white colour.
Change 2- by 0- in ordering number
(Ex. TP.010500-000, e-Touch Flexi 1R-5P White)

e-Touch Flexi e-Touch Panel

The family of touch panels consists of 7 product models with different tactile zones and LEDs for each model.

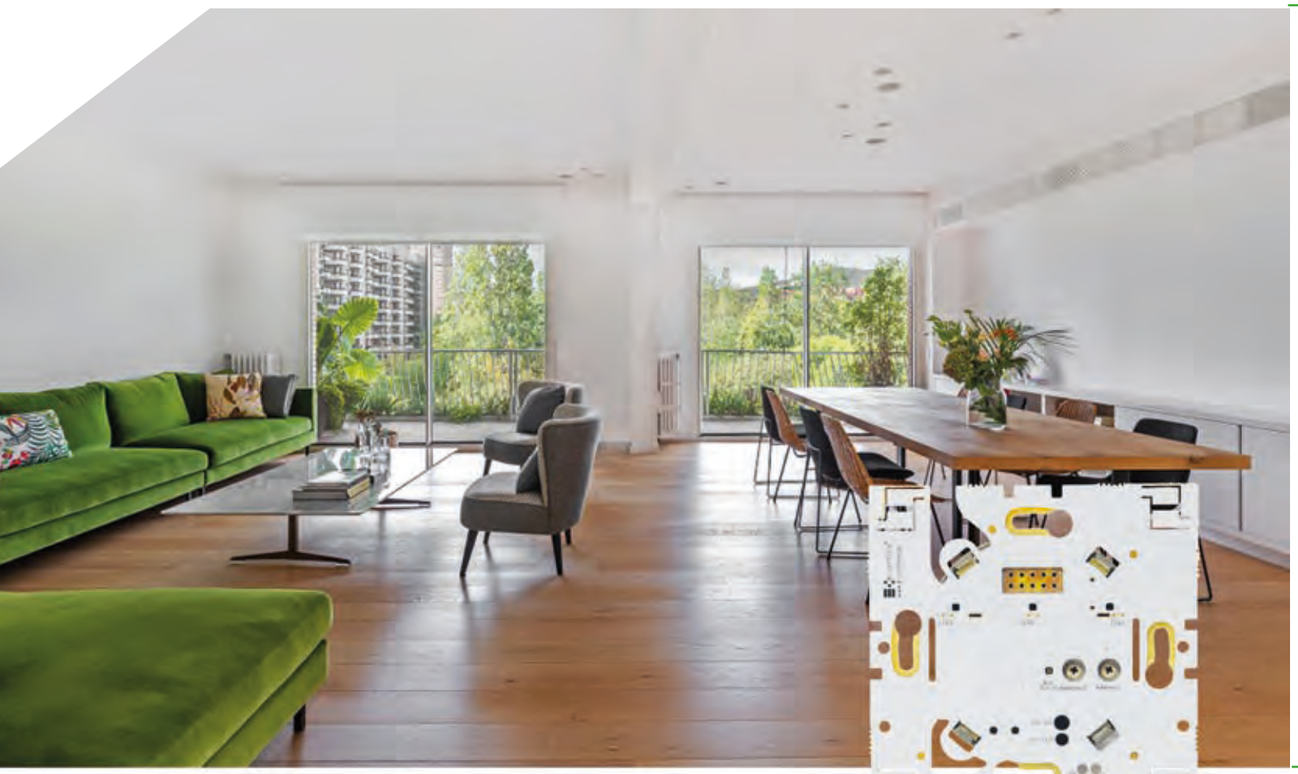
TP.01050X-000 | TP.12060X-000 | TP.02060X-000 | TP.02040X-000 | TP.13090X-000 | TP.16180X-001



DDS00185140000-0 – e-Touch

Sequence of a pushbutton assembly

Bus coupling unit for building automation



BC.082001-001

Intelligent multiprotocol coupling unit for e-Touch panels

e-Bus Coupling is a family of multiprotocol intelligent coupling units that are connected to the e-Touch Flexi touch panels, to provide a communication protocol or also different inputs and outputs to perform a control solution over a lighting system, management of scenes, blinds or curtains automation or any other control required in the installation.

Different models of coupling units **e-Bus Coupling** device are available: some models with communication protocol to integrate into a BMS control system, and some others with physical inputs and outputs to manage a control system.

For lighting control different models are available for digital lighting control with the standard DALI protocol, but also with analog control and 0-10V output, that provide all the functions required for a lighting control solution, like switching on and off, manual dimming and scene management. For any other control, different models with the most used communication protocols of the market are available and provide a way to transfer data with a BMS control system or homes.

e-Bus Coupling has an standard format that can be installed in a universal 66x66 mm wall mount enclosure and includes some holes at 60x60 mm to fix into standard enclosure.

- Bus coupling unit for e-Touch panels
- Multiple protocols for building automation
- Models with Inputs/Outputs for direct control
- Status LED to help commissioning
- For universal enclosure 60x60

DATASHEET

Lighting control, Climate, curtains and blinds

e-controls® electronic intelligent controls, s.l.

Specifications

Models with communcation protocol

BC.090001-001
Coupling unit for KNX
Supply through KNX bus
PROG LED on the back side

BC.080001-001
Coupling unit for DALI
Supply 16 Vdc through DALI bus
DALI bus communication LED indicator

BC.582001-001
Coupling unit for DALI
powered at mains
Supply 95-250 Vac, 50/60 Hz
2 digital inputs
DALI bus communication LED indicator

BC.581002-001
Coupling unit DALI Master
Supply 95-250 Vac, 50/60 Hz
Integrated DALI power supply, máx. 35 mA
DALI bus communication LED indicator

BC.672001-001
Coupling unit for room bus
RS-485
Supply: 24 Vdc
2 digital inputs
Interface: RS-485
Protocol: e-Room Bus

BC.672002-001
Coupling unit for Modbus RTU
Supply: 24 Vdc
2 digital inputs
Interface: RS-485
Protocol: Modbus RTU

Models without communication protocol

BC.501001-001, Coupling unit with 0-10V output
Supply: 95-250 Vac
1 input phase contact
Output 0-10V: Active, 10 mA
Relay: 250 Vac, 10 A, phase contact

BC.501000-001, Bus coupling with relay output
Supply: 95-250 Vac
1 input phase contact
Relay: 250 Vac, 10 A, phase contact

CE KNX DALI Modbus 0-10V

Ordering numbers

BC.090001-001
e-Bus Coupling KNX
Bus coupling unit for KNX

BC.080001-001
e-Bus Coupling DALI
Bus coupling unit for DALI bus

BC.582001-001
e-Bus Coupling DALI Mains
Bus coupling unit for DALI bus

BC.581002-01
e-Bus Coupling DALI Master
Bus coupling unit DALI Master

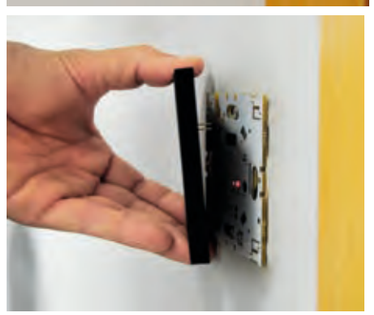
BC.672001-001
e-Bus Coupling RS-485
Bus coupling unit for room bus RS-485

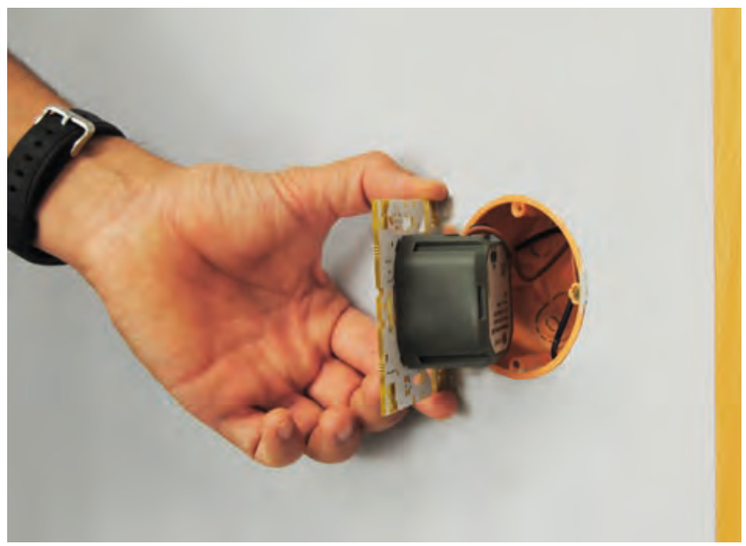
BC.672002-001
e-Bus Coupling Modbus RS-485
Bus coupling unit for Modbus RTU

BC.501001-001
e-Bus Coupling 0-10V
Bus coupling unit with 0-10V output + relay phase contact

BC.501000-001
e-Bus Coupling OnOff
Bus coupling unit with relay phase contact

e-Bus Coupling





Presence sensor with touchless gesture detection

DATASHEET

Door opening, switching lights,
switching equipment

e-controls
electronic intelligent controls, s.l.

TK.502100-000

Touchless switch for multiple control applications

e-Touchless is a new generation presence sensor, which acts as a switch or as a pushbutton without human contact and allows the control of opening/closing doors, raise/lower blinds, switching on/off lights or connect any kind of load, without having to press or touch the mechanism. The device can be configured to operate as a presence detector or as a gesture switch or pushbutton.

In presence detection mode, the device has a sensor that measures the distance very precisely, making it possible to detect an element or a person in a configurable detection range between 10 to 250 cm, and actuate on a load with a timer or also at each detection, change the state of its output.

In gestural mode, the device recognizes the movement of the hand when someone wants to press de mechanism without having to touch it, to act on the load. In this mode, it is also possible to configure the device to operate with a timer to switch off or also at each detection, change the state of its output.

The device has different configuration parameters that provide different operating functions to solve any request and is configured with a wireless NFC interface with the ***EConfigurator*** APP, available for Android on the Google Play Store.

The product is available in panel format e-Touchless Flexi to connect to a frame e-Bus Coupling or also as a *kit e-Touchless OnOff or e-Touchless Noiseless* consisting of the sensor panel, e-Bus Coupling frame and predesigned button label.

Press detection without human contact

Presence or gesture modes

Range up to 250 cm

Relay or optocoupler output

Configuration by NFC with APP EConfigurator

Detection without human contact

- Configurable detection type: Gestural or presence.
- Gestural detection: Detects movement of the hand when pressing.
- Presence detection: Detects an element in a configurable range from 10 to 250 cm. Reflector not required.
- Type of action on the output: State change (switch) or Change with delay time to switch off (timed pushbutton).
- Front touch button for manual control.

Possible configurations

- Wireless configuration by NFC with APP EConfigurator
- NO/NC output type
- Switch off delay time, 1 second to 60 minutes
- Minimum and maximum detection distance from 10 to 250 cm
- Enable detection led
- Minimum gestural hand movement
- Enable clean mode
- Touch switch sensibility

CE

Technical features

- Supply:
  - Kit models: 95-250 Vac 50/60 Hz
  - e-Touchless 1R-5P Model: e-Bus Coupling
- Stand-alone operation
- Laser 1 sensor type
- Maximum detection distance 250 cm
- Blue led detection indicator
- Connector for e-Bus Coupling connection
- Front button design with 4 customizable zones with e-Touch Creator
- Wireless NFC sensor
- IP20 protection degree
- Colours available
  - White
  - Black
  - Customizable
- Dimensions: 86x86x8,5 mm (W x H x D)
- Flush mounting in universal enclosure
- Kit OnOff: Potential free relay 10 A
- Kit Noiseless: Optocoupler, max. 60 V / 10 mA

Available models

- Stand-Alone Kits:
  - e-Touchless OnOff, Potential free relay output.
  - e-Touchless Noiseless, Optocoupler output.
- Device to connect to e-Bus Coupling:
  e-Touchless Flexi 1R-5P

Ordering numbers

Stand-Alone kits

TK.502100-000
e-Touchless OnOff White
Sensor panel with relay output
and predesigned front button in white

TK.502100-002
e-Touchless OnOff Black
Sensor panel with relay output
and predesigned front button in black

TK.502101-000
e-Touchless Noiseless White
Sensor panel with optocoupler output
and predesigned front button in white

TK.502101-002
e-Touchless Noiseless Black
Sensor panel with optocoupler output
and predesigned front button in black

Panels to connect to e-Bus Coupling
These models require the purchase of
an e-Bus Coupling for operating.

TL.010500-000
e-Touchless Flexi 1R-5P White
Gestural/presence sensor panel, White
1 presence sensor, 1 touch zone, 1 Led

TL.010502-000
e-Touchless Flexi 1R-5P Black
Gestural/presence sensor panel, Black
1 presence sensor, 1 touch zone, 1 Led

Control diagram

DDS10205I1000-0 – e-Touchless DDSEN

e-Touch Display
e-Bus Controller

The new touch panel solution for climate and lighting control

e-Touch Display and ***e-Bus Controller*** are the new tactile solution for climate and lighting control for hotel rooms and offices that performs an integral control of the room state through a modern touch interface, intuitive and easy to use. The system is based in two elements that provide a wide variety of possibilities that determine multiple applications of climate and lighting control in rooms.

Device configuration even without power, thanks to the NFC technology

- Colour and design completely customizable
- Multiple pushbuttons configurations
- White backlighted touch panel
- ntegrated temperature sensor and humidity

The controller ***e-Bus Controller*** is plugged to the panel ***e-Touch Display*** and it has different inputs and outputs required for climate control. The family product is based in different models with multiple configurations, like a controller for 3 fan-coil speeds fan-coil or others for Fan-Coil EC with analog 0-10V control that provide an optimal energy efficiency.

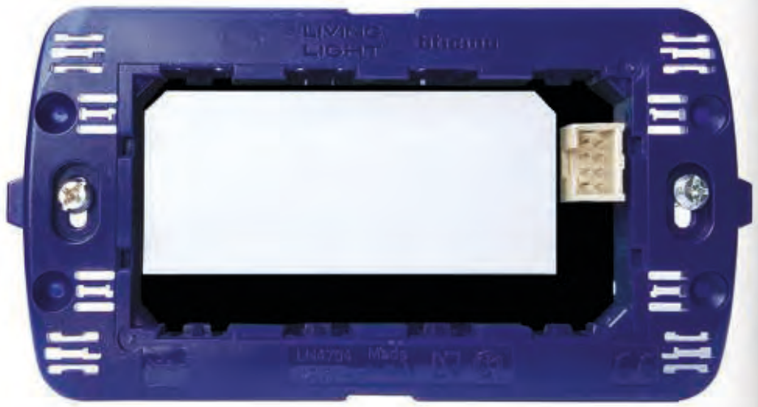
APP for configuration

e-Touch Display

The touch panel ***e-Touch Display*** has a wide screen to show the climate status, it includes a digital temperature sensor and optionally an humidity sensor and can be easily connected to the controller ***e-Bus Controller*** to manage the climate equipment. The touch panel family is based in multiple references with different pushbutton configurations to cover any request in different installations.

- Ultra-flat design
- Total flexibility: Touch panel independent of the controller

e-Bus Controller



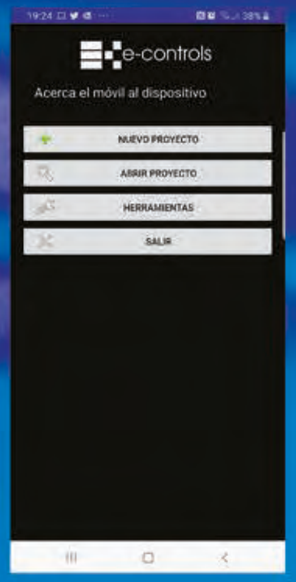
- Different configurations of I/O
- Standard protocols: Modbus, BACnet/IP-FT, LonWorks

APP E-Configurator

Configuration of the climate and lighting projects independently

The **E-Configurator APP** is a tool used to configure all the Touch family products of E-Controls and the fan-coil and lighting controllers of the Modular family. The application allows to configure the climate project independently than the lighting project, and has independent passwords for each project, so that different installer companies can do the commissioning process independently and without incidents over the same product. Using the mobile phone is possible to access all the configuration parameters of the new controllers and can be configured any device in few seconds, providing also a way to send the project between the maintenance staff using e-mail, whatsapp or any other system of sending files.

Auto-configuration of the room number and Modbus address of the device for every room.

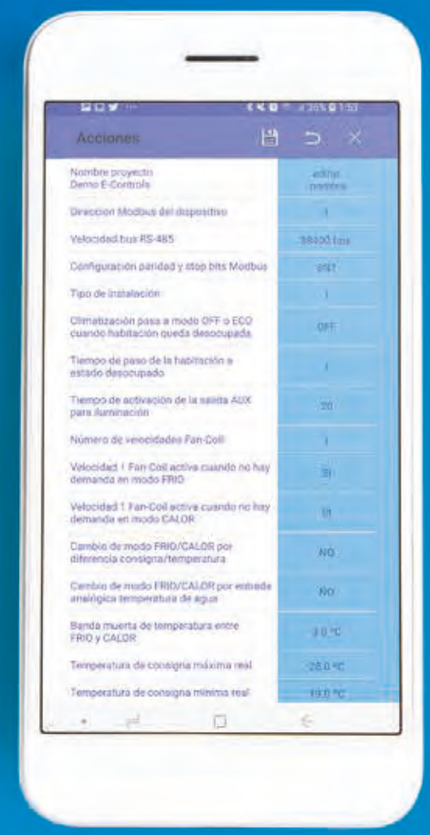


Data transfer using NFC even with the device unpowered

The data transfer between the mobile phone and the device is made it wireless through the NFC technology, available in the vast majority of mobile phones with Android operating system. The way to transfer the information is to enable the NFC service and having the APP installed on the mobile phone. When the phone is placed closed to the device, the APP will start automatically and will read the information contained in the device, allowing the installer to change anything easily. In case of password present, the application will ask the code to unlock the device and read the configuration.

Different passwords for each project to make the climate and lighting commissioning process independently

Import / export project and send it by e-mail or Whatsapp



Climate room controllers for fan-coil EC (0-10V)

Touch panels: e-Touch Display

				
Product name	e-Touch Display White	e-Touch Display Black	e-Touch Display White Humidity	e-Touch Display Black Humidity
Ordering number	TD.00XX00-010 (XX: See table)	TD.00XX02-010 (XX: See table)	TD.00XX00-010-HR (XX: See table)	TD.00XX02-010-HR (XX: See table)
Frame (order separately)	FR.000100-010	FR.000102-010	FR.000100-010	FR.000102-010
Mounting	Flush mount	Flush mount	Flush mount	Flush mount
Enclosure	504E	504E	504E	504E
General features				
Temperature sensor	X	X	X	X
Humidity sensor			X	X
Proximity sensor		X		X
NFC sensor	X	X	X	X
LCD colour	Gray	Black	Gray	Black
Dimensions	142x85x8,5 mm	142x85x8,5 mm	142x85x8,5 mm	142x85x8,5 mm
Weight	85 g	85 g	85 g	85 g

Different combinations of pushbuttons for any request.
Models available in black or white.


TD.0000YY-010 - e-Touch Display 0P


TD.0010YY-010 - e-Touch Display 1P


TD.0020YY-010 - e-Touch Display 2P


TD.0030YY-010 - e-Touch Display 3P


TD.0041YY-010 - e-Touch Display 4P2


TD.0051YY-010 - e-Touch Display 5P2


TD.0060YY-010 - e-Touch Display 6P


TD.0061YY-010 - e-Touch Display 6P2


TD.0070YY-010 - e-Touch Display 7P


TD.0071YY-010 - e-Touch Display 7P2


TD.0080YY-010 - e-Touch Display 8P


TD.0090YY-010 - e-Touch Display 9P

NOTES:

1) YY: Colour: 00: White
02: Black
2) Add -HR for Temperature + Humidity sensor. Example: TD.004000-010-HR

Displays and Controller: e-Bus Display and e-Bus Controller

							
Product name	e-Bus Display	e-Bus Display Modbus	e-Bus Thermo ECO Stand-Alone	e-Bus Controller ECO Stand-Alone	e-Bus Thermo ECO Modbus	e-Bus Controller ECO Modbus	e-Bus Controller ECO TP/FT-10
Ordering number	BD.470001-011	BD.470002-011	RT.600321-011	RT.604421-011	RT.670321-011	RT.674421-011	RT.624421-011
Mounting	Flush/surface mount	Flush/surface mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount
Enclosure	504E	504E	504E	504E	504E	504E	504E
Supply Power	12 Vdc - 24 Vdc	12 Vdc - 24 Vdc	24 Vdc	24 Vdc	24 Vdc	24 Vdc	24 Vdc
Technology	Room Bus	Modbus RTU	Stand-Alone	Stand-Alone	Modbus RTU	Modbus RTU	LonWorks TP/FT-10 BACnet/IP-TP
Channel	RS-485	RS-485	-	-	RS-485	RS-485	TP/FT-10
Digital Inputs	0	0	0	2	0	2	2
Analog Inputs	0	0	0	2	0	2	2
Relay Outputs	0	0	2	3	2	3	3
Analog Outputs (0-10V)	0	0	1	1	1	1	1
Inputs features							
Keycard contact				x		x	x
Window contact				x		x	x
Motion sensor				x		x	x
Water sensor				x		x	x
Door contact				x		x	x
Ext. Temp. sensor				x		x	x
Lighting pushbutton				x		x	x
Outputs features							
Fan-Coil 0-10V			x	x	x	x	x
Cool valve actuator			x	x	x	x	x
Heat valve actuator			x	x	x	x	x
Lighting output				x		x	x
General features							
Backlight color	White	White	White	White	White	White	White
Weight	75 g	75 g	150 g	170 g	160 g	175 g	180 g

Clima | e-Touch Display

Touch panel for climate and lighting control

DATASHEET

Climate control with additional pushbuttons for lighting

e-controls
electronic intelligent controls, s.l.

TD.004002-010

Easy climate and lighting control through one unique panel

e-Touch Display is a new touch panel display for climate and lighting control that is connected to an intelligent frame **e-Bus Controller** to manage the climate and lighting control in a room or zone. The touch panel has a built-in temperature sensor and a humidity sensor (optional) to measure both parameters, and is it possible to supply it in any colour or graphical design, to adapt it to any building interior design. Likewise, different configurations of tactile pushbuttons are available, to adapt the panel to any installation request.

The device has a mechanism to connect the panel to the e-Bus Controller frame (read datasheet) which is including the inputs and outputs requested for the climate and lighting control, but also the communication bus for the room or zone remote management and control.

e-Touch Display has a new configuration mechanism based in the NFC near field communication technology to program the device using and Android based mobile phone with the help of the new **E-Configurator** APP developed by E-Controls, making the commissioning process extremely easy for anyone and drastically reducing the set up time and reducing to zero the potential configuration errors.

The device is including a proximity infrared sensor to detect nearly movements to automatically switch on the device backlight to easily track the device in dark conditions.

Easy configuration with APP and NFC technology

Device configuration without unpackaging

Multiple configurations of pushbuttons available

Freely customizable look and feel

Temperature and humidity sensors

Proximity sensor for backlight auto-on (in black model)

Parameters shown in the display

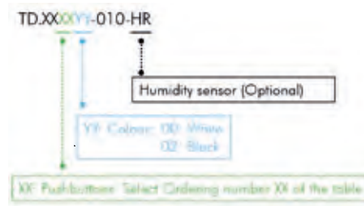
- Ambient temperature
- Setpoint temperature
- °C or °F degrees
- Relative humidity
- Comfort / Economy icons
- Window status
- Heat /Cool mode
- Fan-Coil speed
- Climate control alarmn

Specifications

- Up to 9 different pushbuttons
- Blue LED to show ON/OFF climate state
- Wide area LCD Display
- Digital temperatura sensor
- Humidity sensor (optional model)
- Wireless NFC sensor
- Proximity sensor
- Colours available:
  - White
  - Black
  - Customizable
- Weight: 85 g.

NOTE: Frame not included.
See references page Accessories

Purchasing reference definition table according to pushbuttons and color



Ordering number	# Pushbuttons	PUSHBUTTON ICON											
		Heat/Cool	- T°	+ T°	Fan Speed	On/Off	- HR	+ HR	Lights On	Lights Off	Blinds Raise	Blinds Lower	Radiator
TD.000[YY]-010	2												
TD.001[YY]-010	1					X							
TD.002[YY]-010	2		X	X									
TD.003[YY]-010	3		X	X		X							
TD.004[YY]-010	4		X	X	X	X							
TD.005[YY]-010	4		X	X			X	X					
TD.006[YY]-010	5	X	X	X	X	X							
TD.007[YY]-010	5		X	X	X	X							X
TD.008[YY]-010	5		X	X	X	X			X	X			
TD.009[YY]-010	6		X	X	X	X					X	X	
TD.010[YY]-010	7		X	X	X	X			X	X			
TD.011[YY]-010	7	X	X	X	X	X					X	X	
TD.012[YY]-010	8	X	X	X	X	X					X	X	
TD.013[YY]-010	8	X	X	X	X	X							
TD.014[YY]-010	9	X	X	X	X	X							

NOTES:
1) YY: Colour: 00: White / 02: Black
2) Add -HR for Temperature + Humidity sensor. Example: TD.004000-010-HR

CE

Ordering numbers

e-Touch Display

Device configuration without power, using NFC technology and mobile APP

Clima | e-Bus Controller, e-Bus Display

Bus coupler for touch panel e-Touch Display

DATASHEET

Compact controller with I/O for fan-coil control

e-controls®
electronic intelligent controls, s.l.

BD.670002-011

Fan-coil controller for efficient climate management

The **e-Bus Controller** coupler is a room controller with analog/digital inputs and outputs for the touch panel e-Touch Display, available with different communication protocols for remote room management, or to operate in stand-alone mode with no communication bus. The controller allows a room energy consumption optimization through its digital inputs, which are connected to a keycard reader or the combination between motion sensors and a door contact, to detect the room occupancy state and manage the climate control to switch it to economy mode when the room becomes unoccupied, or stop the climate system when the window is opened. Different models of e-Bus Controller are available and can be selected depending on the climate system used in the building, like water pipes systems and EC fan-coils with analog 0-10V control or standard 3 fan-coil speeds. One model for VRF Panasonic indoor units is also available and provides an easy integration solution for these kind of applications.

e-Bus Display is a model version with no inputs/outputs, but including communication interface to communicate with any other device through a Modbus RTU interface.

The controllers family is available in different models depending on the communication protocol requested, to choose betweek LonWorks, BACnet/IP over FT, Modbus RS-485 or stand-alone (no communication).

Bus coupler for e-Touch Display

e-Bus Controller model with I/O for room automation

e-Bus Display model without I/O

Communication bus for remote management

Modbus RTU, BACnet/IP-FT, LonWorks

Product concept

- e-Bus Display: Model with display and without Inputs/Outputs
- e-Bus Controller Stand-Alone: Controller with I/O and stand-alone operation
- e-Bus Controller BMS: Controller with I/O and BMS communication protocol

Possible combinations

- Compact flush mounted device: e-Touch Display + e-Bus Controller
  - Fan-Coil EC 0-10V
  - Fan-Coil 3 Speed

Modbus

LONMARK®

0-10V

CE

Specifications

- Supply power: 24Vdc
- Stand alone or with communication interface
- Modbus RTU, LonWorks, BACnet/IP-TP
- Digital inputs (contact type):
  - Keycard / Motion sensor
  - Window contact
- Digital/analog inputs (NTC 10K)
  - Water temperature (Heat/Cool) /
  - Door contact
  - External temperature sensor
- Analog output Fan-Coil EC 0-10V (model ECO)
- Relay outputs (5 A):
  - Fan-Coil 3 speed
  - Heat-Cool valve / Cool valve (2P / 4P)
- Flush mounted in 504E enclosure

Ordering numbers

Display Models

BD.470001-011 e-Bus Display RS-485
Coupler RS-485 for e-Room Modular

BD.470002-011 e-Bus Display Modbus
Coupler RS-485 with Modbus RTU protocol

Ordering numbers

Controller models

RT.600321-011
e-Bus Thermo ECO Stand-Alone
Communication: Not available
1 output fan-coil EC 0-10V, 2 relay outputs: valves

RT.670321-011
e-Bus Thermo ECO Modbus
Communication: RS-485, Modbus RTU
1 output fan-coil EC 0-10V, 2 relay outputs: valves

RT.604421-011
e-Bus Controller ECO 4I/4O Stand-Alone
Communication: Not available
Inputs: Keycard, Window, Motion sensor, Temp. sensor
1 output fan-coil EC 0-10V, 3 relay outputs: 2 valves, 1 aux.

RT.674421-011
e-Bus Controller ECO 4I/4O Modbus
Communication: RS-485, Modbus RTU
Inputs: Keycard, Window, Motion sensor, Temp. sensor
1 Output fan-coil EC 0-10V, 3 relay outputs: 2 valves, 1 aux.

RT.624421-011
e-Bus Controller ECO 4I/4O TP/FT-10
Communication: LonWorks TP/FT-10, BACnet/IP over TP
Inputs: Keycard, Window, Motion sensor, Temp. sensor
1 Output fan-coil EC 0-10V, 3 relay outputs: 2 valves, 1 aux.

NOTE: Ask for 3 fan-coil speed models.

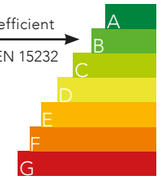
e-Bus Controller, e-Bus Display

Mounting mechanism of e-Touch Display with e-Bus Controller or e-Bus Display

e-Touch Display

e-Bus Display
e-Bus Controller

NOTE: Order products separately.



DDS001951S000-0 – e-Bus Controller

Clima | e-Room® Panasonic Touch

Room climate control for VRF applications

DATASHEET

Indoor unit control for optimized installation management

e-controls®
electronic intelligent controls, s.l.

RV.004401-000

Direct expansion system control and room management in a single device

The **e-Room®** Panasonic room climate controller, specially designed for hotel installations, provides direct control of a direct expansion indoor unit without the need for gateways. The device includes inputs and outputs to optimize room energy consumption by operating climate, lighting and motorized blind or curtain controls based on room occupancy.

Four operating modes are available to adapt device inputs and outputs to the requirements of each installation. Depending on the selected option, room occupancy may be monitored through a keycard switch contact or a motion detector in order to drive climate control, lighting or curtains based on room occupation. The device includes also a window contact input that will temporarily stop climate control operation, in addition to a temperature sensor that will control a secondary climate zone through a valve actuator output.

e-Room® Panasonic is available in two product models: one model for stand-alone operation with no communication bus, and another model with a Modbus or LonWorks communication bus that allows integration into a building management installation for remote climate control.

Direct indoor unit control

Climate, lighting and curtain management

Comprehensive control for maximum savings

Remote climate control activation

May be integrated into a BMS

Energy Savings

- Climate and lighting control OFF when room is unoccupied
- Climate control ON/OFF through window contact
- Occupancy based temperature setpoint
- Dual Comfort/ECO setpoint for Heat/Cool
- Dual configurable user and operating setpoints
- Temperature sensor for secondary zone

Indoor Unit Control

- Direct e-Room® control
- Available functions: ON/OFF, Setpoint modification, Fan-Coil speed (I-II-III-AUTO), Heat/Cool

Device Configuration

- Celsius/Fahrenheit display
- Fan coil position on no demand
- Device on OFF or ECO on no occupation
- Heat/Cool mode change
- Occupancy detection through keycard switch or motion detector
- Setpoint for Occupied/ECO
- Secondary zone setpoint offset

Features

- Indoor unit control
- No bus or remote control bus options
- Ambient temperature sensor
- White backlight LCD screen
- Four installation based operating modes
- Three digital inputs (dry contact):
  - Keycard switch/Motion detector/ Lighting contact
  - Window contact
  - Blind raise-up pushbutton/Door contact
- One analogue input (NTC10K):
  - Blind lower pushbutton/External temperature sensor
- Four output relays (5 Amp):
  - Courtesy light
  - Lighting breaker
  - Blind raise-up motor
  - Blind lower motor/Secondary zone valve
- Alarm indication on display screen
- Alarm reporting via bus
- Supply from indoor unit bus
- Weight: 290 g.

Installation

- Single device per zone
- Reduced installation time
- Improved maintenance

Ordering numbers

RV.002002-00X
e-Display Panasonic Stand-Alone
2 Inputs: Keycard, Window

RV.074402-00X
e-Room Panasonic Modbus RTU
4 Inputs, 4 Outputs

NOTE: X: 0 White, 2 Black

Available I/O configurations for different operating modes

	Input 1	Input 2	Input 3	Input 4
Option 1	Keycard	Window	Lighting	Temperature
Option 2	Keycard	Window	Blinds Up	Blinds Down
Option 3	Motion S.	Window	Door Contact	Temperature
Option 4	Lighting	Window	Blinds Up	Blinds Down

	Output 1	Output 2	Output 3	Output 4
Option 1	Courtesy	Lighting	Not Used	Valve actuator
Option 2	Courtesy	Lighting	Blinds Up	Blinds Down
Option 3	Courtesy	Lighting	Not Used	Valve actuator
Option 4	Not used	Lighting	Blinds Up	Blinds Down

CE

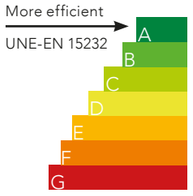
Patented product

e-Room® Panasonic

Input / Output Diagrams

Operating mode no. 2

Operating mode no. 3

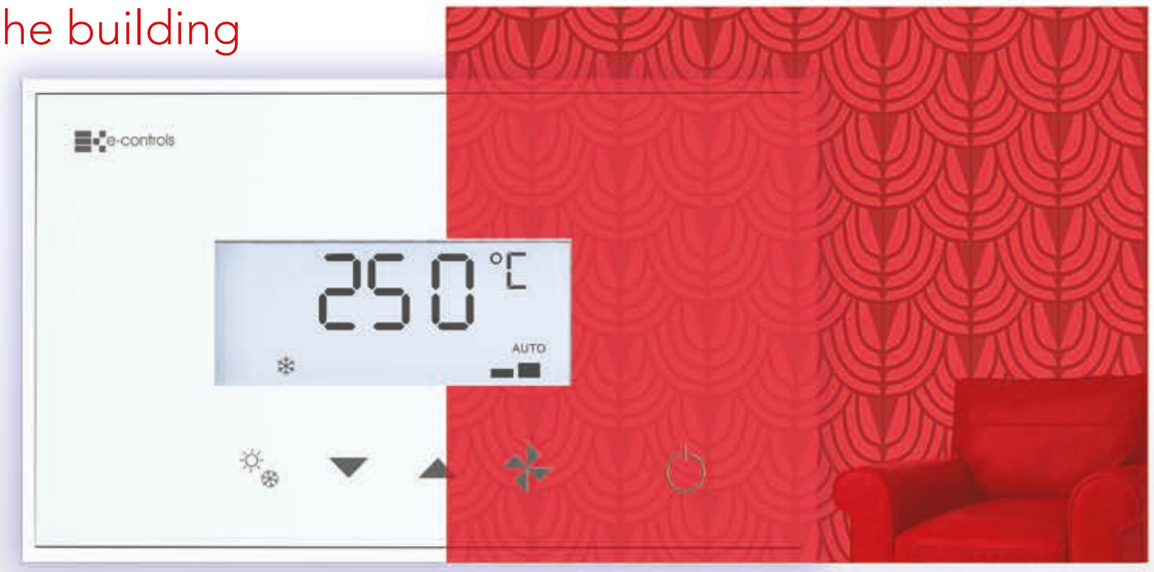


DDS0014501000-0, RV.0X4401-000 - e-Room® Panasonic

Customize at your style

PRODUCT PATENTED

Adapt the product to the interior design of the building



Decide the colour that best fits your needs
Select the icons that you wish

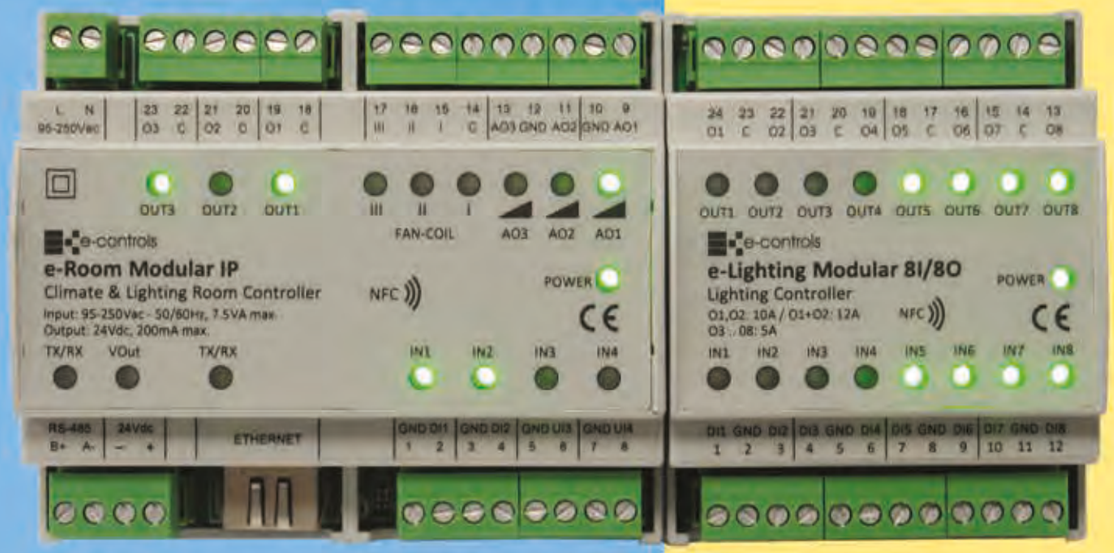
Modify the pushbuttons aesthetic at any time and change them as many times as you want in only 10 seconds!

The new patented solution by E-Controls allows you design the pushbuttons to any demand, change them at any time and adapt to any request.

Mix text and icons
Put name to every scene

E-Controls provides an special printing service to deliver the pushbuttons pre-designed in 48 hours.

Welcome to The Modular IP Room



Maximum efficiency / minimum integration cost of climate + lighting

e-Room Modular

The climate control is performed with the **e-Room Modular** device which makes all the management and climate control depending on the occupancy state of the room, thanks to the information of its digital inputs. The product has multiple configurations of its outputs that provide the most wide variety of climate control possibilities, in which a PI control for fan-coil EC and 0-10V valves control, that provide an optimal comfort and energy saving, or an on/off control for valves and three fan-coil speeds for installations that require a cost competitive solution.

Highest device integration to any installation requirement

e-Lighting Modular

The lighting control is performed through the **e-Lighting Modular** device, available in different configurations of inputs and outputs, and being possible to create any combination based in up to two devices per room. The digital inputs can be connected to standard pushbuttons from any manufacturer and allow the possibility to create any lighting control scene using the relay outputs of the device.

IP connectivity for easily integration in GPON networks (fiber to the room)

The Modular IP Room is a new concept of control system for hotel rooms designed by E-Controls, based in a product family to control the climate and lighting system in a room. Two or more devices can be easily connected through a side connector to provide multiple combinations that perform any requirement in the room. The result is a complete adaptable solution for any room design that provides an optimal functionality at a competitive cost.

The system is based in different devices to perform the climate control and lighting in the rooms, selecting the products that best fits to the installation, depending on the request: only climate control, only lighting or both climate and lighting control at the same time.

The **Modular IP Room** is a system that includes multiple connectivity options for the remote control of the room, but highlighting the IP connectivity model that performs a way to connect the device to the ethernet structured cabling of the building, to monitor the room status through internet from any place in the world.

- **Ethernet IP connectivity**
- **Integrable in GPON networks**
- **Climate and lighting control in rooms**
- **Climate controller expandable up to 2 lighting controllers**
- **Configuration using APP and NFC technology**
- **Direct integration of climate + lighting**
- **Devices with distributed intelligence**

Intuitive easy to use APP for device configuration

Clima | e-Room Modular

Climate room controller for fan-coil rooms

RM.554924-011

Climate and Lighting complete automation for hotels and buildings

e-Room Modular is a new concept of climate and lighting controller for hotel rooms with a communication protocol and internal power supply, to connect to a display for room automation and several inputs and outputs for room management like keycard contact, motion sensors, window and door contact, that provide an optimal energy management through an efficient control of the climate and lighting systems, depending on the room occupancy status.

The device is including an special side connector to interconnect to different expansion devices like the **e-Lighting Modular**, that provides a complete lighting control inside the room, making lighting switch on scenes when the guest enters in the room, but also performing simultaneously over different lighting circuits when a wall pushbutton is pressed.

A front panel with multiple LED indicators provide an easy way to know the inputs and outputs status of the device, offering a practical and effective tool for the commissioning process and maintenance of the site. A wireless NFC sensor is also present on the device and allows exchanging information with the E-Configurator APP to configure the device instantly, reducing the installation programming costs drastically. The device is available with different communications interfaces like Ethernet IP and Modbus RS-485, but also with no bus for stand-alone operation.

IP connectivity, RS-485 or stand-alone

Fan-coil EC 0-10V control or 3 speeds

Proportional valve 0-10V control or On/Off

Easy configuration with APP and NFC technology

Model with LED of I/O status

DATASHEET

Remote BMS control using Ethernet IP or RS-485

e-controls®
electronic intelligent controls, s.l.

Five possible configurations

- Model TN:
  3 Speed fan-coil + Valves On/Off
- Model PRO:
  3 Speed fan-coil + Valves 0-10V
- Model ECO:
  Fan-Coil EC (0-10V) + Valves On Off
- Model MAX:
  Fan-Coil EC (0-10V) + Valves 0-10V
- Model TOP:
  3 outputs 0-10V + 6 relay outputs

Connectivity and communication

- Ethernet IP
- RS-485
- Stand-alone

CE Modbus

Specifications

- Supply power: 85- 264 Vac 50/60Hz
- Stand-alone operation
- BMS Bus: Modbus TCP (IP) or Modbus RTU (RS-485)
- Room bus:
  - RS-485
  - Supply output: 24 Vdc, 200 mA
- Digital inputs (contact type):
  - Keycard contact / Motion sensor
  - Window contact
- Analog/digital inputs:
  - Water sensor / Door contact
  - Lighting master switch
- Analog outputs(0-10V):
  - Fan-Coil EC
  - Cool valve actuator
  - Heat valve actuator
- Relay outputs (5 A):
  - 3 Fan-Coil speeds
  - Cool valve actuator
  - Heat valve actuator
  - Lighting contact
- Front panel with LEDs for I/O status (optional)
- NFC Technology for device configuration
- Side expansion connector
- DIN rail enclosure, 6TE
- Dimensions: 106 x 90 x 62 mm
- Weight: 300 g (IP 4I/9O)
- CE industrial range (2000 V)

Ordering numbers

RM.5X4601-011
e-Room Modular 4I/6O TN, NFC and LEDs
4 inputs: 2 digital, 2 digital/NTC
6 relay outputs: 3 fan-coil speeds, 2 valves, 1 aux.

RM.5X4411-011
e-Room Modular 4I/4O ECO, NFC and LEDs
4 inputs: 2 digital, 2 digital/NTC
1 output fan-coil EC 0-10V, 3 relay outputs: 2 valves, 1 aux.

RM.5X4603-011
e-Room Modular 4I/6O PRO, NFC and LEDs
4 inputs: 2 digital, 2 digital/NTC
2 outputs valves 0-10V, 4 relay outputs: 3 fan-coil speeds, 1 aux.

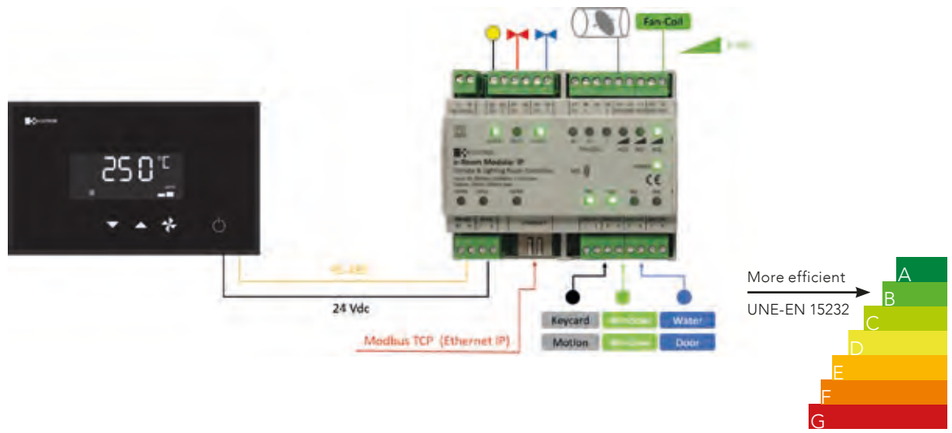
RM.5X4413-011
e-Room Modular 4I/4O MAX, NFC and LEDs
4 inputs: 2 digital, 2 digital/NTC
1 output fan-coil EC 0-10V, 2 outputs 0-10V valve actuators, 1 relay output aux.

RM.5X4924-011
e-Room Modular 4I/9O TOP, NFC and LEDs
4 inputs: 2 digital, 2 universal (digital/NTC/0-10 V/4-20 mA)
9 outputs: 6 relays, 3 analog 0-10V

NOTES:
1) Models available in different configurations:
X = 5 Modbus TCP (IP)
X = 7 Modbus RTU (RS-485)
X = 0 Stand-Alone
2) Ask for models without NFC and LEDs

e-Room Modular

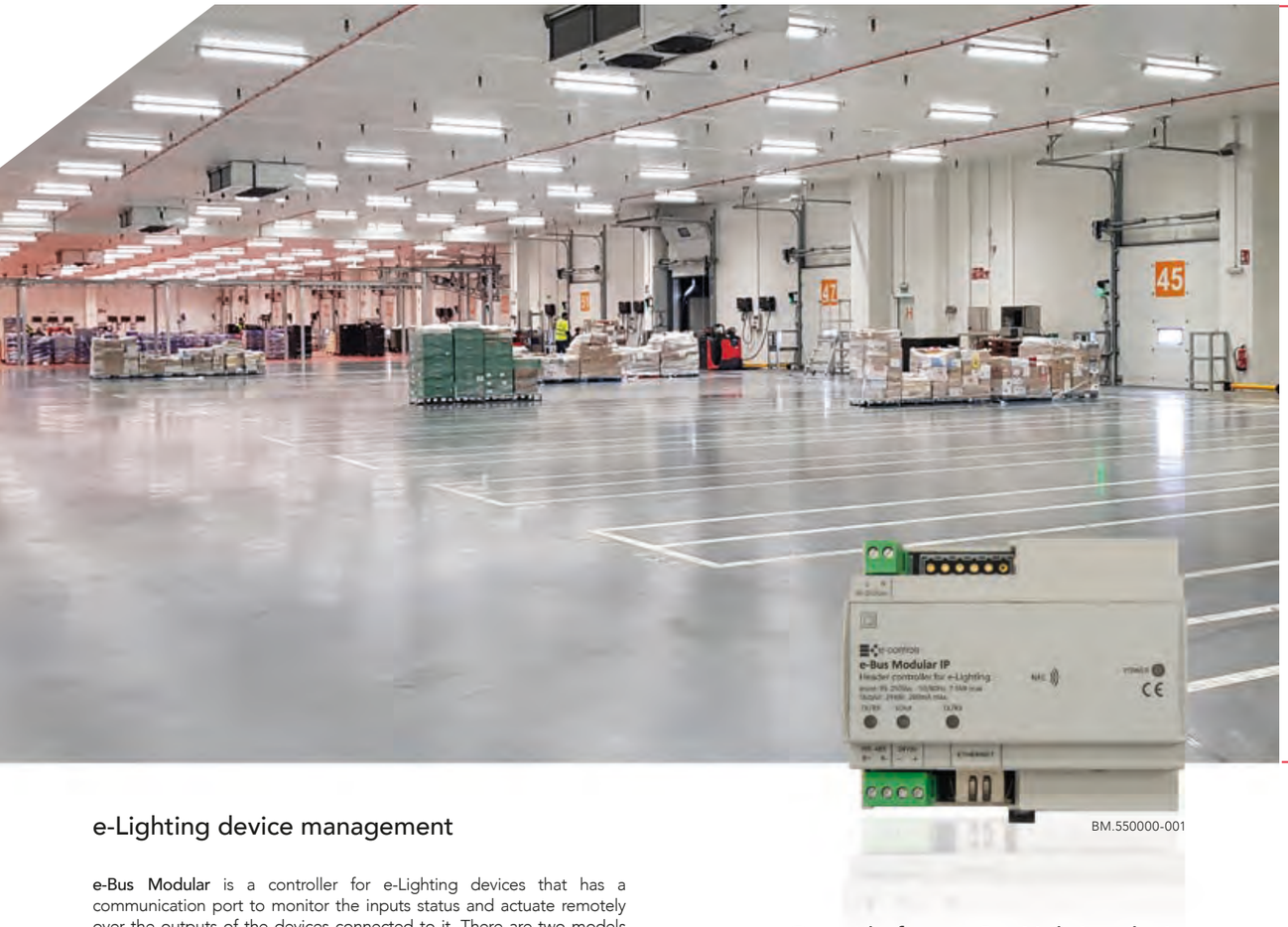
Input / Output Diagrams



DDS0018526000-0 – e-Room Modular

Control | e-Bus Modular

Header controller for e-Lighting devices



BM.550000-001

e-Lighting device management

e-Bus Modular is a controller for e-Lighting devices that has a communication port to monitor the inputs status and actuate remotely over the outputs of the devices connected to it. There are two models available with different communication ports: one model with an Ethernet/IP port to connect to the structured wiring of the building to be able to remotely control the e-Lighting devices over the Modbus TCP protocol, and a second model with an RS-485 port to communicate using Modbus RTU. In both models the device is an slave device in a network operated from a master device.

The device has a side connector called "Modular Bus" through which up to 3 e-Lighting devices of any input/output configuration can be connected. It also has several led indicators to signal the inputs and outputs status, and an NFC interface through which it is possible to configure several parameters of the device, like the Modbus device address, using the EConfigurator APP for mobile phone. The device can also be configured through the communication port.

The product has a Modbus register map with all the registers necessary to configu¬re, monitor and control the e-Lighting devices that are connected to the unit. The Modbus map of the device is divided in three parts: Configuration registers, input registers and output registers. Through these registers it is possible to configure the device, to know the state of the inputs and actuate over the outputs of the e-Lighting devices. The device can control up to 3 e-Lighting devices of any combination of inputs/outputs.

Control of up to 3 e-Lighting devices

Ethernet/IP or RS-485 BMS port

Modbus TCP / Modbus RTU

Direct supply 95-250 Vca

24 Vdc supply output for accessories

DATASHEET

Control of up to 3 e-Lighting devices

e-controls®
electronic intelligent controls, s.l.

Specifications

- Control of 3 e-Lighting devices of any model.
- Combination of any e-Lighting device
- Complete Modbus
- Slave device
- Front panel with communication LED activity
- Power ON LED with device status information

Remote control

- Complete Modbus map with input registers for device control, output registers for device monitoring and configuration registers for all 3 e-Lighting Modular devices and the e-Bus Modular.

Device Configuration

- NFC interface with EConfigurator APP with a mobile phone
- Through Modbus communication port

Technical features

- Supply input: 95-250 Vac 50/60 Hz
- Supply output: 24 Vdc, 200 mA
- Ethernet/IP model:
  - Modbus TCP
  - 10/100 Mbps
  - RJ45 connector
- RS-485 model:
  - Modbus RTU
  - 1200 to 115200 baud
- "Modular Bus" side connector for up to 3 e-Lighting devices
- RS-485 port for external device control
- NFC Interface for configuration with EConfigurator APP
- Bus activity LED indicators
- Power status LED
- DIN rail enclosure, dimensions 106x98x58mm (WxHxD)
- Weight 230 g
- CE Industrial range (2000 V)

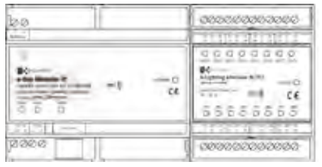
Ordering numbers

BM.550000-001
e-Bus Modular IP, Modbus TCP

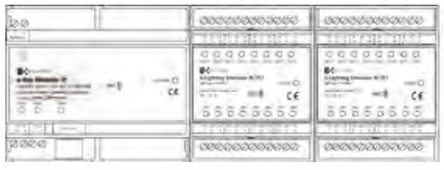
BM.570000-001
e-Bus Modular RS-485, Modbus RTU

e-Bus Modular

Examples of possible combinations



e-Bus Modular IP + 1 e-Lighting Modular 8E8S



e-Bus Modular IP + 2 e-Lighting Modular 8E8S

e-Bus Modular IP + 3 e-Lighting Modular 8E8S

DDS00185261100-0, BM.5X0000-001 - e-Bus Modular

Lighting | e-Lighting Modular

Intelligent lighting controller for lighting management

DATASHEET

Control of pushbuttons and lighting circuits
in rooms and electrical cabinets

e-controls®
electronic intelligent controls, s.l.

IO.008800-001

Integrated functions

- Switch input state
- Pushbuttons: Short and long press detection
- Pulsecount object S0 type for energy and water meters
- Enable/disable relay outputs
- Blinds control objects for inputs and outputs
- Timers for relay outputs

Distributed intelligence

- Stand-alone control with independent microcontroller.
- Automation of functions independently of e-Room Modular.
- Configuration with APP using Wireless NFC technology.

Specifications

- Eight dry contact digital inputs (with power), overvoltage protected.
- Two relay outputs 10 A potential free, common contact (max. 12 A)
- Six relay outputs 5 A potential free, common contact (max. 10 A)
- Front panel with LEDs for I/O status (optional)
- NFC Technology for device configuration
- Side expansion connectors (both sides)
- DIN rail enclosure, 4TE
- Dimensions: 71 x 90 x 62 mm
- Weight: 230 g (8I/8O)
- CE industrial range (2000 V)

Ordering numbers

IO.000400-001
e-Lighting Modular 4DO HMI
4 relay outputs

IO.004400-001
e-Lighting Modular 4DI/4DO HMI
4 digital inputs, 4 relay outputs

IO.008800-001
e-Lighting Modular 8DI/8DO HMI
8 digital inputs, 8 relay outputs

CE

Lighting scene control in hotels and buildings

e-Lighting Modular is a lighting controller for hotel rooms and offices, that allows to perform the lighting control of different lighting circuits in a room or zone, to create lighting scenes depending on the requests of every moment. The product family is based in two different models, one with 8 digital inputs and 8 relay outputs and another with 4 digital inputs and 4 relay outputs. It is possible to combine up to 2 devices in a room automation configuration or up to 8 devices in a cabinet control combination, requesting for this case additional expansion power supply devices.

The digital inputs of the device can be connected to standard pushbutton sockets to create any lighting scene, acting on the different room lighting circuits through the relay outputs of the device or other connected devices.

A front panel with multiple LED indicators provide an easy way to know the inputs and outputs status of the device, offering a practical and effective tool for the commissioning process and maintenance of the site. A proximity NFC sensor is also present on the device and allows exchanging information with the E-Configurator APP to configure the device instantly, reducing the installation programming costs drastically.

LED indicators for I/O status

Easy configuration with APP and NFC technology

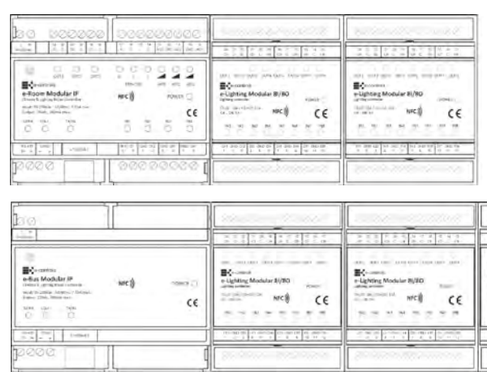
Connectable to a room controller, bus or stand-alone

Digital inputs for standard pushbuttons

Special relays for LED lighting control

e-Lighting Modular

Input / Output Diagrams



Possible configurations:

1) e-Room Modular with two e-Lighting Modular

2) e-Bus Modular with three e-Lighting Modular

DDS00185320000-0 – e-Lighting Modular

Clima

e-controls® electronic intelligent controls, s.l.

Climate room controllers for fan-coil installations

	Display devices		Stand-Alone devices				Bus system devices					
												
Product name	e-Display e-Display Plus	e-Display Modbus e-Display Plus Modbus	e-Thermo Stand-Alone	e-Room Stand-Alone	e-Room Plus Stand-Alone e-Room Plus Stand-Alone PRO	e-Room Plus Stand-Alone PIR e-Room Plus Stand-Alone PIR PRO	e-Thermo Modbus	e-Room Classic	e-Room Modbus	e-Room Plus e-Room Plus PowerLine	e-Room ECO LonWorks	e-Room ECO Modbus
Ordering number	RD.470000-000 RL.970000-000	RD.470001-000 RL.670001-000	ET.600401-001 ET.600501-001	RC.604505-000	RP.502501-000 RP.502502-000	RP.504501-000 RP.504502-000	ET.670501-001	RC.624501-000	RC.674501-000	RP.626601-000 RP.514501-000	RC.624421-000	RC.674421-000 - Black RC.674421-001 - White
Frame	Bticino Simon	Bticino Simon	Bticino	Bticino	Simon	Simon	Bticino	Bticino	Bticino	Simon	Bticino	Bticino
Mounting	Flush/Surface	Flush/Surface	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount	Flush mount
Enclosure	504E Universal x 2	504E Universal x 2	504E	504E	Universal x 2	Universal x 2	504E	504E	504E	Universal x 2	504E	504E
Supply Power	12-24 Vdc 12 Vdc	12-24 Vdc 12 Vdc	24 Vac/Vdc	24 Vac/Vdc	95-250Vac 50/60Hz	95-250Vac 50/60Hz	24 Vac/Vdc	24 Vac/Vdc	24 Vac/Vdc	24 Vac/Vdc	24 Vac/Vdc	24 Vac/Vdc
Technology	-	Modbus RTU	Stand-Alone	Stand-Alone	Stand-Alone Upgradeable	Stand-Alone Upgradeable	Modbus RTU	LonWorks BACnet/IP-TP	Modbus RTU	LonWorks	LonWorks BACnet/IP-TP	Modbus RTU
Channel	RS-485	RS-485	-	-	- PowerLine	- PowerLine	RS-485	TP/FT-10	RS-485	TP/FT-10 PowerLine	TP/FT-10	RS-485
Digital Inputs	0	0	0	2	2	3	0	2	2	3	2	2
Analog Inputs	0	0	0	2	0	0	0	2	2	2	2	2
Relay Outputs	0	0	4 / 5	5	5	5	5	5	5	6	3	3
Analog Outputs (0-10V)											1	1
Inputs features												
Keycard contact				x	x			x	x	x	x	x
Window contact				x	x	x		x	x	x	x	x
Motion sensor				x		x		x	x	x	x	x
Water sensor				x				x	x	x	x	x
Door contact				x		x		x	x	x	x	x
Ext. Temp. sensor				x				x	x	x	x	x
Lighting pushbutton				x				x	x	x	x	x
Blinds pushbuttons										x		
Outputs features												
3 Fan-Coil speeds			x	x	x	x	x	x	x	x		
Fan-Coil 0-10V											x	x
Cool valve actuator			x	x	x	x	x	x	x	x	x	x
Heat valve actuator			x	x	x	x	x	x	x	x	x	x
Zone 2 valve actuator												
Lighting output				x	x	x		x	x	x	x	x
Blinds outputs										x		
General features												
IR receiver												
Front PIR sensor	Optional	Optional				x						
Front Temp. sensor	x	x	x	x	x	x	x	x	x	x	x	x
Humidity sensor	Optional	Optional										
CO2 sensor		Optional										
Backlight color	Blue	Blue	White	Blue	Blue	Blue	White	Blue	White	Blue	White	White
Dimensions	142x85X42 mm 158x89x39 mm	142x85x42 mm 158x89x39 mm	142x85x42 mm	142x85x42 mm	158x89x39 mm	158x89x39 mm	142x85x42 mm	142x85x42 mm	142x85x42 mm	158x89x39 mm	142x85x42 mm	142x85x42 mm
Weight	110 g	110 g	130 g	235 g	250 g	250 g	140 g	235 g	235 g	270 g	230 g	230 g

Clima | e-Display, e-Display Plus

Display for fan-coil control

DATASHEET

Temperature, humidity and motion sensor in a single device

e-controls
electronic intelligent controls, s.l.

RD.970000-000

Display with multiple sensors for room climate control

e-Display and **e-Display Plus** are a family of visualization displays used for climate and fan-coil control in hotel rooms and offices. A wide variety of models with different sensors can be used by the system integrator in any installation to get the maximum energy saving as possible. The products are available with different frames to select the one that best fits any room space.

For room climate control the device is including a temperature sensor in the front panel and optionally an humidity sensor to control at any time the room temperature. If an occupancy control is requested for the room, one model is available with a motion sensor in the front panel, that provides the possibility to detect the room unoccupied and change the climate to low power consumption and switch off the lights.

Two product models are available depending on the application: the e-Display to communicate directly with the e-Room Controller and e-Room Modular, and the e-Display Modbus to communicate with any Modbus device of the market. The products communicate with any fan-coil controller or room controller using an standard RS-485 interface.

Display for fan-coil controller

Temperature, humidity, motion sensor

Remote monitoring of climate control and sensors

Modbus protocol over RS-485

Different frames and colors available

Remote control

- Climate ON/OFF control
- Ambient temperature and setpoint to show on display
- Different icons available to modify over the network: Window, alarm, heat/cool/auto mode, Fan-coil speed, CONF/ECO/ANTI mode, %HR, ppm

Monitoring with BMS

- Room temperature sensor for climate control
- Room humidity sensor for climate control
- Motion sensor for occupancy control
- Setpoint temperature, heat/cool mode, fan-coil speed

Device configuration

- Modbus address, speed and parity
- Celsius/Fahrenheit measuring units
- Fan-coil speeds
- Default setpoint
- Maximum/minimum user setpoint limits
- Setpoint/temperature to show on the display
- Different pushbutton lock options

Features

e-Display and **e-Display Plus**
- Supply Voltage: 12-24 Vdc
- Interface: RS-485
- Protocol: e-Room Bus
- Network terminator included

e-Display Modbus and **e-Display Plus Modbus**
- Supply Voltage: 12-24 Vdc
- Interface: RS-485
- Protocol: Modbus RTU

All models
- Ambient temp. sensor: +5 to +45°C
- Humidity sensor (optional): 10 to 95% RH
- Motion sensor (optional):
  - Maximum detection distance 8 m
  - Detection angle: 98°
  - Detection diameter 18 m (at 7 m)
  - Digitally adjustable sensitivity
- Flush mounting
- Surface mounting enclosure available
- Different frames and colors available
- Dimensions:
  - e-Display: 142x85x42 mm
  - e-Display Plus: 158x88x33 mm
- Weight (frame not included): 110 g

Ordering numbers

RD.470000-000
e-Display RS-485
Display with temp. sensor for e-Room Modular

RD.470001-000
e-Display Modbus
Display with temp. and Modbus RTU

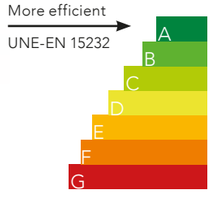
RL672000-010
e-Display Plus PIR HR Modbus
Display with temperature, humidity and motion sensor with Modbus RTU

CE

DDS00145130I0-0, RD.970000-000 – e-Display DDSEN

e-Display and e-Display Modbus in a BMS system

Input / Output Diagrams



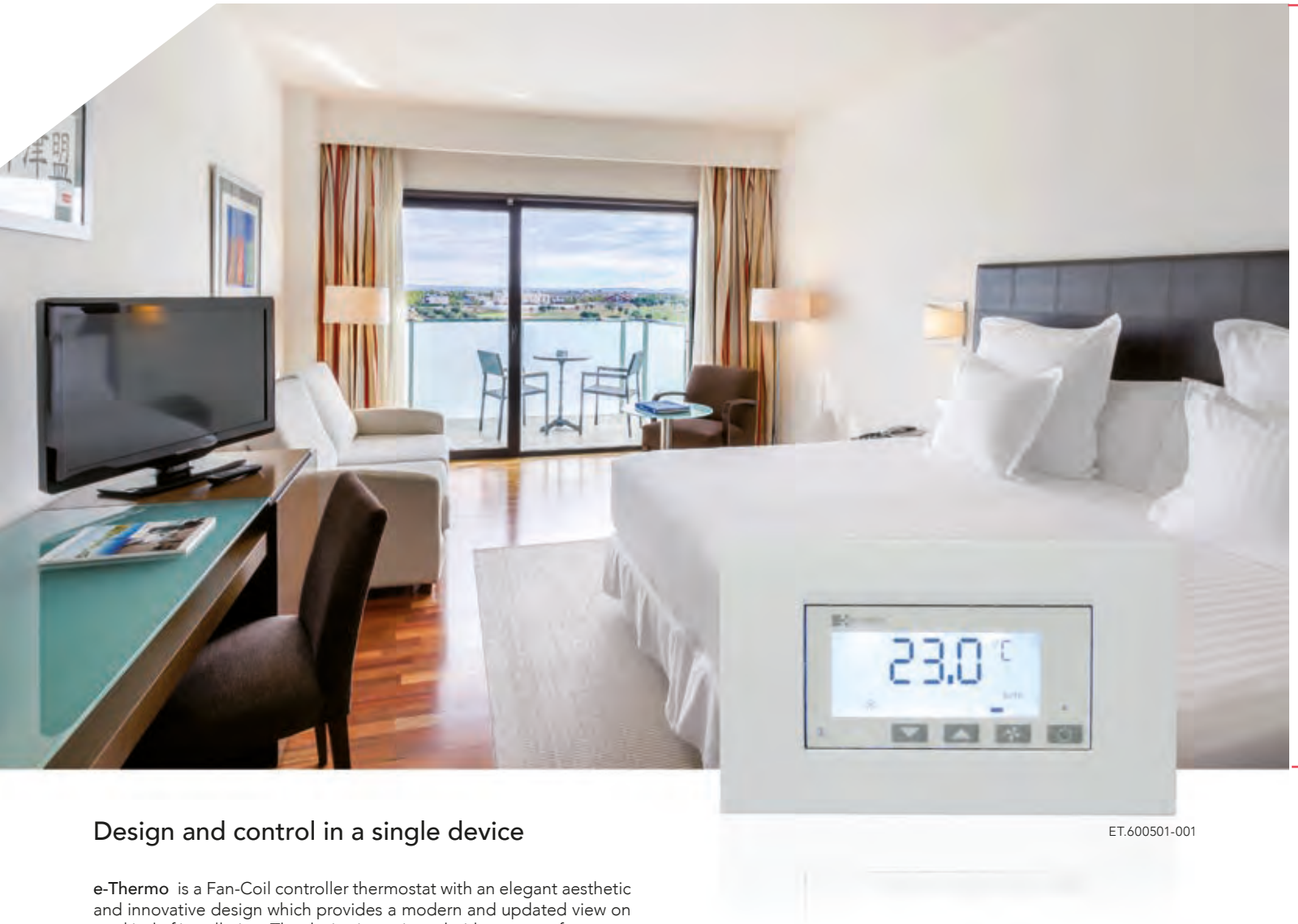
Clima | e-Thermo

Climate Thermostat for Fan-Coil rooms

DATASHEET

Optional remote control with Modbus protocol

e-controls
electronic intelligent controls, s.l.



ET.600501-001

Design and control in a single device

e-Thermo is a Fan-Coil controller thermostat with an elegant aesthetic and innovative design which provides a modern and updated view on any kind of installation. The device is equipped with some performance and operating features which makes it particularly indicated for hotels, office buildings and retail installations since it includes different configuration parameters that make it flexible and adaptive to any requirement.

A white backlit LCD display allows an easy-to-read screen and different icons view. By means of four easy to understand pushbuttons, the user can control the device according to the requirements at any time.

Maximum and minimum temperature user setpoints can be configured on the device, among the maximum and minimum operating temperature setpoints to improve on the installation energy savings. It also has a parameter to set a maximum release temperature which allows to automatically activate the device and climates a zone when it raises a preconfigured value.

The device is available in two different models for two pipes or four pipes installations and in addition it is available with Modbus RTU communication to monitor and remote control the device and easy integrate it in a global control building network.

Innovative aesthetic design

Stand-alone operation

Configurable 2 pipes / 4 pipes

Max/min configurable setpoints

Modbus RTU optional

Energy Saving

- Max/min user setpoints
- Max/min real setpoints
- Three fan-coil speeds to adapt to each temperature
- Remote BMS control to switch off at programmed times

Device Configuration

- Celsius/Fahrenheit display
- 1 or 3 Fan-coil speeds selection
- Fan-coil state on no demand
- Temperature/setpoint visualization
- Max/min user setpoints
- Max/Min real setpoints
- Auto On for Temperature
- Device state after reset
- Heat/Cool mode switching
- NO/NC valves
- Brightness display level
- Modbus baud rate and parity (bus model)

Installation

- A single device per zone
- Less installation time
- Improved maintenance

Features

- Supply voltage: 24Vac/Vdc
- Stand-alone operation
- Bus BMS: Modbus RTU (RS-485) (model ET.670501-001)
- Ambient temperature sensor on front panel
- White backlight LCD display
- 4 pushbuttons
- Relay outputs (5Amp):
  - Three Fan-Coil speeds (3 outputs)
  - Heat-Cool valve actuator / Cool valve actuator (2P/4P)
  - Heat valve actuator (4P)
- Flush mounting
- BTicino Light / LightTech frame
- Dimensions: 142x85x42mm
- Weight: 130gr.

Ordering number

ET.600401-001
e-Thermo Stand-Alone 2 Pipes
Outputs: 3 Fan-Coil Speeds, Heat/Cool valve actuator

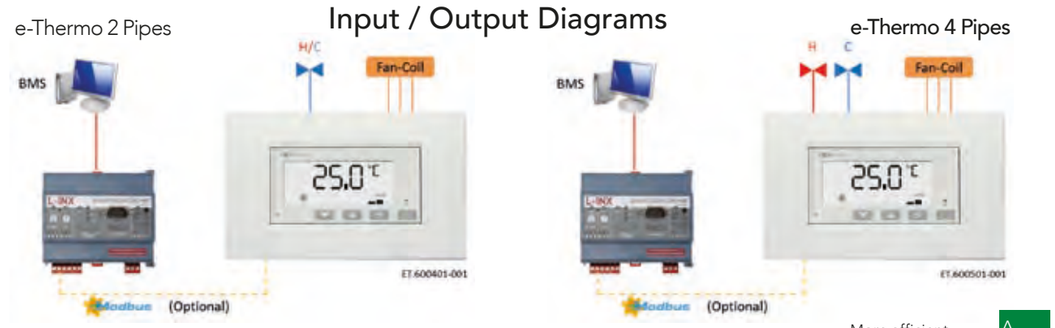
ET.600501-001
e-Thermo Stand-Alone 4 Pipes
Outputs: 3 Fan-Coil Speeds, Heat valve actuator, Cool valve actuator

ET.670501-001
eThermo Modbus 4 Pipes
Outputs: 3 Fan-Coil speeds, Heat valve actuator, Cool valve actuator
Bus BMS: Modbus RTU (RS-485)

CE Modbus

e-Thermo

Input / Output Diagrams



DDS00014518000-0, ET.600501-001 - e-Thermo 4T DDSEN

Clima | e-Room® Stand-Alone

Stand-alone room climate control for fan-coil applications

DATASHEET

Temperature Setpoint Control
Based on Zone Occupancy

e-controls
electronic intelligent controls, s.l.

RC.604505-000

Climate control at an optimal cost

The **e-Room®** Stand-Alone device is a stand-alone fan coil controller designed to cover the demands of hotels and offices where a sophisticated remote control system for room management is not required. The device includes a set of inputs and outputs that provide zone climate control based on occupancy and window position, thus allowing significant energy savings that dramatically reduce electricity costs in buildings.

e-Room® Stand-Alone includes a temperature sensor on its front panel that provides room temperature measurement and Heat/Cool valve actuation as appropriate; fan coil speed is controlled to cover the energy demand. An analog input is also included to connect an external temperature sensor, used in installations where temperature is measured at the return point.

The device includes a large blue backlit display screen that provides the user with an optimal visualization, in addition to user-friendly pushbuttons for simple and effective control. Device configuration is accomplished through the pushbuttons and the display screen; up to 24 different parameters may be adjusted in order to set the device as required.

Stand-alone control for low-cost installations

Occupancy based climate control

Designed for 2 pipe and 4 pipe systems

A single control device for each zone

Auxiliary lighting output

Energy Savings

- Up to 20% zone energy savings
- Occupancy based temperature setpoint change
- Window contact stops operation
- Configurable Max/Min setpoints
- Dual ON/ECO setpoint
- ECO mode on unoccupied zone

Device Configuration

- Celsius/Fahrenheit display
- 1 or 3 fan coil speeds selection
- Fan coil state on no demand
- Device on OFF or ECO on unoccupied zone
- Heat/Cool mode switching
- 2 pipe / 4 pipe system
- Keycard switch contact or lighting input
- Heat/Cool deadband
- Occupied/ECO state setpoints
- Device state after reset
- Heat/Cool device startup
- NO/NC valves

Patented product
Registered design

Installation

- A single device per zone
- Less installation time
- Improved maintenance
- No communication bus required

Features

- Stand-alone climate control
- Room temperature sensor on front panel
- Blue backlit LCD screen
- 4/5 pushbuttons
- Digital inputs (dry contact):
  - Keycard switch contact / lighting contact
  - Window contact
- Analog inputs (NTC10K):
  - Water temperature sensor
  - External temperature sensor
- Relay outputs (5 Amp):
  - Three Fan-Coil speeds (3 outputs)
  - Cool valve (4 pipes) / H-C (2 pipes)
  - Heat valve (4 pipes) / Lighting
- Supply voltage: 24 Vac / 24 Vdc
- BTicino Light / Light Tech frame (different colors available)

Ordering numbers

RC.604505-000
e.Room® Stand-Alone
4 pushbuttons

RC.604505-100
e.Room® Stand-Alone
5 pushbuttons (Heat / Cool)

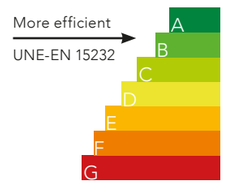
CE

e-Room® Stand-Alone

Input / Output Diagrams

2 pipe system + keycard occupancy control

4 pipe system + motion sensor occupancy control



DDS0006503040-0, RC.604505-X00 - e-Room® Stand-Alone DDSEN

Clima | e-Room® ECO

Climate room controller for fan-coil EC 0-10V

RC.624421-000s

Proportional control to maximize the energy saving

e-Room ECO is a fan-coil controller for new generation buildings, that provides a very precisely fan-coil speed proportional control to optimize the climate temperature in a room, to achieve the desired temperature in the shortest time and with the maximum energy saving possible. The device provides an optimal comfort of the installation thanks to a fine fan-coil speed tuning, through a proportional and integral control algorithm that performs a 0-10V analog control of the speed.

Through different configurations, it is possible to choose different operating valve actuator modes, being possible to select between an on/off control or a proportional control for thermal valve actuators.

The device is supplied at 24 Vdc using an external power supply and has different inputs to manage the climate control depending on the zone occupancy and the window state. Occupancy zone detection is carried out through a key card contact or motion sensors. An auxiliary output provides a potential free contact relay to manage the lighting control.

Throughout a simple setting menu, it is possible to modify multiple configuration parameters to adapt the product to any installation request. In the different product references, there is one model with Modbus RTU communication and another one with both protocols simultaneously LonWorks TPFT-10 and BACnet-IP over TP.

Proportional fan-coil control

0-10V analog output control

Energy saving for unoccupied room

BMS communication Modbus RTU / LonWorks TP / BACnet-IP TP

DATASHEET

Proportional control of fan-coil speed for a perfect comfort

e-controls® electronic intelligent controls, s.l.

Energy Savings

- Fan-coil speed proportional control
- Valve actuator ON/OFF control
- Climate control for occupancy detection
- Occupancy detection based on key card or motion sensor
- Window contact stops operating
- Changes to OFF/ECO mode if unoccupied room

Device configurations

- Centigrade/Fahrenheit displayed
- Switch-off fan-coil state with no demand
- Device OFF or ECO by changing to unoccupied
- HEAT/COOL mode operation
- 2 Pipes / 4 Pipes installation
- Temperature/set-point displayed
- Configurable Max/Min set-point
- Set-point in occupied/ECO states
- Device state after a reset
- Auto-switch on device HEAT/COOL
- Valve actuators NO/NC type
- Window contact NO/NC type
- Lighting courtesy/contactor output
- Display backlight level

Features

- Supply Voltage: 24 Vdc
- Stand-alone operation
- BMS communication: Modbus RTU (RS-485) or LonWorks TP/FT-10 + BACnet-IP TP
- Front panel ambient temperature sensor
- White backlight LCD display
- Digital inputs (Contact type):
  - Keycard / Door
  - Window
  - Motion sensor
- Analog input for external temp. sensor
- Fan-coil 0-10V analog output
- Relay outputs 5A:
  - Cool valve actuator
  - Heat valve actuator
  - Auxiliary lighting
- BTicino frame
- Flush mounting in 504E enclosure
- Dimensions: 142x86x54 mm
- Weight: 230 g

LONMARK® Modbus 0-10V

Ordering numbers

RC.624421-000
e-Room ECO 4I/4O TP/FT-10
LonWorks TP/FT-10, BACnet/IP-TP
4 Inputs: Keycard, Window, Motion sensor, Temperature
1 Output fan-coil EC 0-10V, 3 Relay outputs: 2 valves, 1 aux

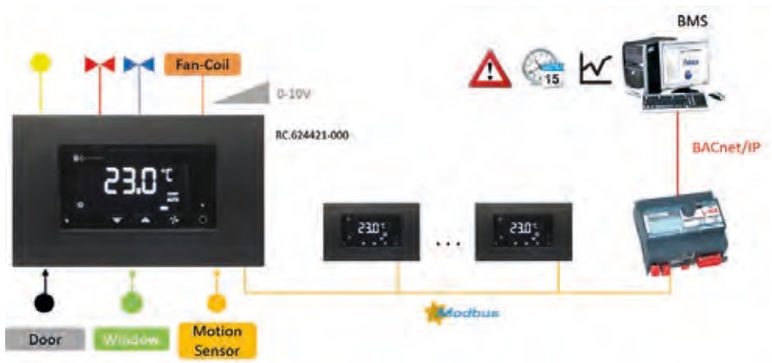
RC.674421-000 - Black
e-Room ECO 4I/4O Modbus RTU
Modbus RTU (RS-485)
4 Inputs: Keycard, Window, Motion sensor, Temperature
1 Output fan-coil EC 0-10V, 3 Relay outputs: 2 valves, 1 aux

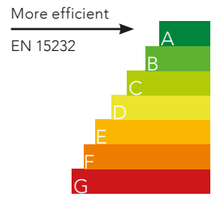
RC.674421-001 - White

CE

Control diagram

Input / Output Diagrams





DDS1018503000-0 – e-Room ECO DDSEN

Clima | e-Room®

Room Climate Control for Fan Coil applications

DATASHEET

Open Systems integrable HVAC control

e-controls®
electronic intelligent controls, s.l.

RC.624501-000

Energy efficiency in climate control

e-Room® is a device designed to provide overall room climate control on fan coil based systems. The device operates over the HVAC system depending on the occupancy status of the room and the window status, managing the fan coil and valves according to the temperature and the setpoint defined. Its operation provides a user friendly control and allows remote facility management through an standard ISO/IEC 14908 (LonWorks®) or Modbus RTU (RS-485) communication bus depending on model. Originally designed for use in hotels, its versatility has made it present nevertheless in offices, small rural hotels and homes, amongst others.

e-Room® Classic is a solution comprising a single device that includes on its front panel a large display screen, pushbuttons and a temperature sensor, in addition to card reader contact and window contact inputs that provide energy efficiency optimization in installations. It further includes analog inputs for water temperature measurement (changeover function), and external temperature sensor measurement. The device also includes output relays for Heat/Cool valve actuator On/Off control and three outputs to manage fan coil speed. All these features are included in a single device to support a simple, easy and fast installation and to optimize startup times and facility maintenance. In case of two pipes installation, the additional output can be used also for lighting control purposes. Thanks to its versatility, the device can be configured to control the occupancy status of the room using a keycard contact or a motion sensor and a door contact.

Two different models comprise the product reference: **e-Room® Classic** for **LonWorks®** based systems and e-Room Modbus for Modbus RTU installations.

Energy consumption optimization

Designed for 2 pipe and 4 pipe systems

On/Off valve control

3 fan-coil speed

Stand-alone operation

LonWorks® or Modbus RTU

Energy Efficiency

- Up to 20% energy savings
- Zone occupancy detection based on keycard switch contact or motion detector upon model
- Window contact stops operation
- Configurable Max/Min setpoints
- Dual ON/ECO setpoint
- ECO mode on unoccupied zone

Remote Management

- Remote manual or programmable On/Off control
- Adjustable setpoints
- Pushbutton locking feature

Integration

- ISO/IEC 14908-2 TP/FT-10 LonWorks® bus
- LonMark® compatible
- Modbus RTU (RS-485)
- Low cost model 2I/4O Modbus RTU

Patented product

Installation

- One single device per zone
- Reduced installation time
- Improved maintenance

Features

- Supply Voltage 24Vac/24Vdc
- Stand-alone operation
- Front panel ambient temperature sensor
- Blue backlighted LCD display
- Digital inputs (contact type):
  - Keycard switch contact / Motion detector
  - Window contact
- Analog inputs (NTC10K):
  - Water temp. Heat-Cool / Door contact
  - External temperature sensor
- Relay outputs (5Amp):
  - Three Fan-Coil speeds (3 outputs)
  - Heat-Cool valve actuator / Cool valve actuator (2P / 4P)
  - Auxiliary / Cool valve actuator (2P / 4P)
- TP/FT-10 twisted pair (Lon model)
- RS-485 twisted pair (Modbus model)
- BTicino Light frame (colors available)

Ordering numbers

RC.624501
e-Room Lon-BACnet/IP TP/FT-10

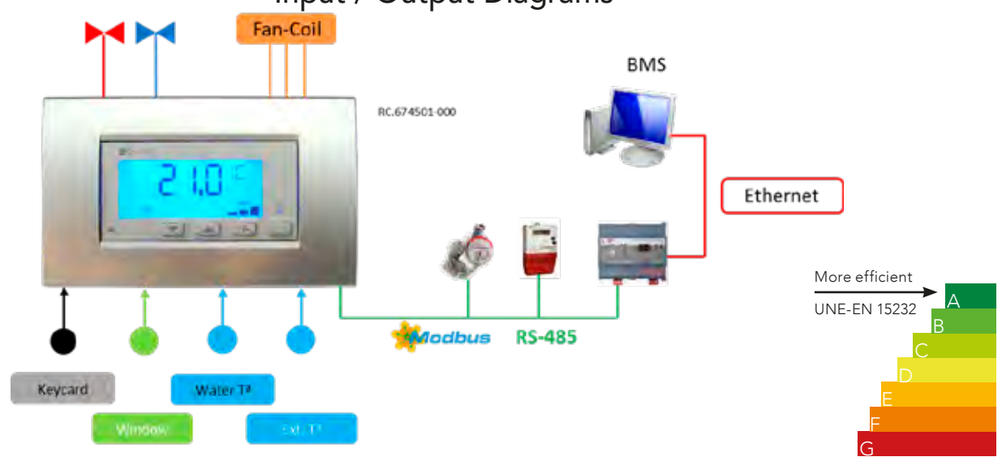
RC.672401-000
e-Room® Modbus 2I/4O
RC.674501-000
e-Room® Modbus 4I/5O

Modbus LonMark® CE

e-Room® Modbus application for keycard switch contact 4 pipes installation

e-Room® Modbus 4 In / 5 Out

Input / Output Diagrams



DDS001450900-0 RC.624501-000 - e-Room Classic DDSEN

Clima | e-Room® Plus

Climate and Lighting Control from a Single Unit

RP.626601-000

Overall Zone Energy Efficiency

e-Room® Plus is a device that provides room climate and lighting energy management control. It is designed to optimize energy savings in room or zone climate and lighting services. The unit includes various operating profiles to cover every possible requirement for offices, hotels, hospitals and old people's homes.

e-Room® Plus is designed to be integrated into a network to perform remote control through the standard ISO/IEC 14908 (LonWorks®) communication bus using the TP/FT-10 twisted pair cable or through mains using the PowerLine media for retrofit installations. The device includes key card reader contact and window contact inputs for climate energy savings, in addition to a digital input and a relay output to control a lighting system. It further includes analog inputs for water temperature measurement, and external temperature sensor. Two relay outputs are used for Heat and Cool valve actuator On/Off control and three more ones for the fan coil speed.

The TP/FT-10 version model includes several pre-programmed applications for hotel, office and hospital room automation. The PowerLine model is the ideal solution for retrofit applications where bus cable installation difficult. The robust and reliable communication through mains is possible using the LonWorks communication and can be integrated in any LonMark® system. Two different models are available, one of each with integrated PIR sensor for motion detection.

Climate and lighting energy efficiency

Hotel/Office/Hospital operating modes

On/Off valve control

Key card contact or detector based occupancy monitoring

LonWorks® TP/FT-10 or PowerLine

DATASHEET

Climate and Lighting Control from a Single Unit

e-controls® electronic intelligent controls, s.l.

Energy Efficiency

- Up to 25% energy savings
- Climate + lighting control in a single device
- Occupancy monitoring based on key card contact or presence detector
- Window contact stops operation
- Configurable Max/Min setpoints
- ECO mode for climate and lighting control

Remote Management

- Remote or programmable On/Off control
- Adjustable setpoints
- Pushbutton locking feature

Integration

- ISO/IEC 14908-2 TP/FT-10 network
- ISO/IEC 14908-3 PowerLine network
- LonMark® compatible

Installation

- Single device
- Reduced installation time
- Improved maintenance

Features

- 24 Vac/24 Vdc supply voltage (TP/FT-10)
- 95-250Vac supply voltage (PowerLine)
- Ambient Temperature on front panel
- Blue backlighted LCD display
- Digital inputs (contact type):
  - Keycard contact / Motion detector
  - Window contact
  - Lighting pushbutton
- Analog inputs (NTC10K):
  - Water temp. Heat-Cool / Door contact
  - External temperature sensor
- Relay outputs (5Amp):
  - Three Fan-Coil speeds (3 outputs)
  - Heat-Cool valve actuator /Cool valve actuator (2P / 4P)
  - Courtesy Lamp / Heat valve actuator (2P / 4P)
  - Auxiliary output
- TP/FT-10 twisted pair or PowerLine
- IR receiver for remote operation
- Integrated PIR motion sensor (PowerLine PIR model)
- Simon 82 or Nature series frame
- Flush mounting in two 65x65 universal enclosure

Patented product

Ordering numbers

RP.626601-000
e-Room® Plus TP/FT-10, 4 Keys

RP.626601-100
e-Room® Plus TP/FT-10, 5 Keys (H/C)

RP.514501-000
e-Room® Plus PowerLine, 4 Keys

RP.515501-010
e-Room® Plus PowerLine PIR 4 Keys

LONMARK®

CE

e-Room® Plus application for keycard switch contact Hotel 4 Pipes Installation

e-Room® Plus

Input / Output Diagrams

DDS00085040000-2 - e-Room Plus DDSEN

Clima | e-Room® Plus Stand-Alone

Stand-Alone HVAC room controller for rooms

DATASHEET

Stand-Alone controller expandable
to remote communication

e-controls
electronic intelligent controls, s.l.

RP.504501-010

Energy efficiency in HVAC with automatic occupancy detection

e-Room Plus Stand-Alone is an stand-alone climate controller for water pipes installations with fan coil, designed to fully optimize the energy consumption of installations because of its ability to switch the climate off or change to economy mode, when the room or zone becomes unoccupied.

The device is directly supplied from mains and has different inputs and outputs for carrying out the climate control depending on the zone occupancy and the window state. Occupancy zone detection is carried out through a key card contact or a motion sensor built in the front panel which, along with a room door contact, detect the guest entrance and activates, stops or changes the climate to economy mode automatically or disconnects it depending on the configuration. On 2 pipes installations it is possible to use the auxiliary output for lighting controls purposes, automatically operating the courtesy lighting or general lighting when someone enters or leaves the room.

Throughout a simple setting menu it is possible to modify multiple configuration parameters to adapt the product to the need of any installation. In the different product references, there is one autonomous version expandable to BMS systems communication through electrical mains.

Energy saving for unoccupied room

Integrated motion sensor

Stand-alone operation

Mains electrical supply

Expandable to BMS communication

Energy Savings

- Climate control for occupancy detection
- Occupancy detection based on key card or integrated sensor
- Window contact stops operating
- Changes to OFF/ECO mode if unoccupied room

Device configurations

- Centigrade/Fahrenheit displayed
- 1 or 3 fan-Coil speeds selection
- Fan-Coil state without demand
- Device OFF or ECO by changing to unoccupied
- HEAT/COOL mode operation
- 2 Pipes / 4 Pipes installation
- Temperature/set-point displayed
- Max/Min set-point
- Set-point in occupied/ECO states
- Device state after a reset
- Auto-switch on device HEAT/COOL
- Valve actuators NO/NC type
- Window contact NO/NC type
- Lighting courtesy/contactor output
- Display backlight level
- Motion sensor sensibility
- Motion sensor detection test

Features

- Supply Voltage: 95 to 250Vac - 50/60Hz
- Stand-alone operation
- Front panel ambient temperature sensor
- Blue backlight LCD display
- Integrated motion sensor (optional)
- Maximum detection distance 8 meters
- Motion sensor detection angle 98°
- Detection diameter 16mts (at 7mts)
- Digitally adjustable detection sensibility
- Digital inputs (Contact type):
  - Keycard contact/Door contact
  - Window contact
  - Auxiliary motion sensor
- Relay outputs (5Amp):
  - Three Fan-Coil speeds (3 outputs)
  - Heat-Cool valve actuator / Cool valve actuator (2P/4P)
  - Courtesy Lighting / Heat valve actuator (2P/4P)
- Expandable to PowerLine communication
- Simon S82 or Nature frame
- Flush mounting
- Dimensions: 158x89x33 mm
- Weight: 250 g

CE

Ordering numbers

RP.504501-000
e-Room Plus Stand-Alone
Inputs: Keycard, Window, Water, Ext Temp.
Outputs: 3 Fan-Coil speeds, Cool VA, AUX

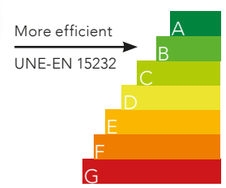
RP.502502-000
e-Room Plus Stand-Alone PRO
Inputs: Keycard, Window
Outputs: 3 Fan-Coil speeds, Cool VA, AUX
Expandable to PowerLine communication

RP.504501-010
e-Room Plus Stand-Alone PIR
Inputs: Door, Window, Motion sensor
Outputs: 3 Fan-Coil speeds, Cool VA, AUX
Integrated motion sensor in front panel

RP.504502-010
e-Room Plus Stand-Alone PIR PRO
Inputs: Door, Window, Motion sensor
Outputs: 3 Fan-Coil speeds, Cool VA, AUX
Integrated motion sensor in front panel
Expandable to PowerLine communication

e-Room® Plus Stand Alone

Input / Output Diagrams



DDS0014512000-0 – e-Room Plus Stand-Alone DDSEN

Temperature, humidity and pressure display

DATASHEET

Display parameters sequential reading

e-controls®
electronic intelligent controls, s.l.

DC.621001-000

Weather parameters under control

e-Clima is a device that provides temperature, relative humidity and pressure values supplied by different sensors located in a room. It includes an EN 14908 LonWorks® communication bus through which values supplied by the various remote sensors are received; these are in turn displayed on the screen for simple and intuitive reading. An analogue input is provided for direct connection of an NTC temperature sensor where a temperature sensor is not to be connected to the bus.

e-Clima allows the sequential display of sensor supplied temperature, humidity and pressure values. Two versions are available, one without local setpoint control and another with local control that allows temperature and relative humidity setpoint adjustment through a 4 button keypad, to have the values sent through the Lon network to a remote climate control device.

This unit is particularly suited for applications such as hospital operating rooms, clean rooms, laboratories, refrigeration chambers, cinemas, maintenance departments, etc.

Intuitive display

Easy and fast reading

Temperature, Humidity and Pressure

External sensors

Keypad for setpoint adjustment

LonWorks® network

Display

- Temperature, Humidity and Pressure
- Sequential reading
- Adjustable display times
- Configurable display backlighting
- Configurable auto power on

Remote Management

- Remote On/Off
- Keypad adjustable setpoints
- LonWorks® network based parameter transmission

Integration

- ISO/IEC 14908 LonWorks® bus
- LonMark® compatible

Installation

- Single display unit
- Optional external temperature sensor

Features

- Supply Voltage 24Vac/24Vdc
- TP/FT-10 twisted pair
- ISO/IEC 14908 LonWorks network
- BTicino Light frame (different colors available)
- Independent external sensors
- External temperature sensor (optional)
- Temperature range: –199.9 to +199.9 (°C/°F) @ 0.1 °C/1 °C
- Humidity range: 0% to 99% @ 1%
- Pressure range: –99 to +99 Pa @ 1 Pa

Ordering numbers

DC.621000-000
e-Clima

DC.621001-000
e-Clima Setpoints

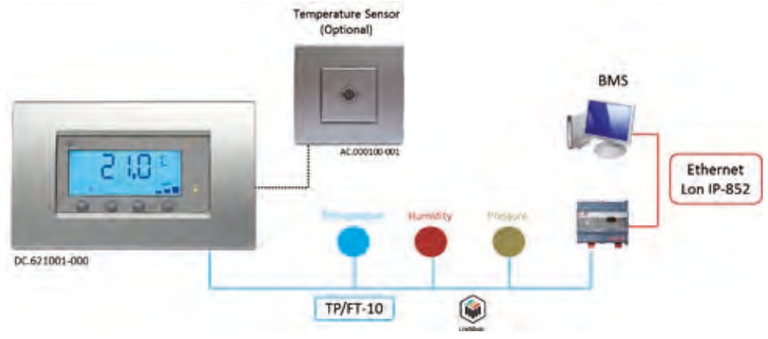
Patented product

LONMARK®

CE

e-Clima

Input / Output Diagrams



DS01019505000-0, DC.621000-000 - e-Clima DDSEN

Sensors

e-controls® electronic intelligent controls, s.l.

Motion and light sensors reference guide for lighting applications and room automation

Stand-Alone devices

Control system devices

Bus system devices












Product name	e-Detector AutoOnOff	e-Multisensor AutoOnOff	e-Multisensor AutoDim 1-10V	e-Multisensor AutoDim DALI	Multilux High Bay DALI Master	e-Sensor Noiseless e-Sensor Noiseless Mains	e-Detector Noiseless e-Detector Noiseless Mains	e-Multisensor 0-10V	e-Multisensor DALI	e-Multisensor DALI Wide	e-Multisensor DALI Mains Wide	Multilux High Bay DALI	Multilux 360 DALI	Multilux 360 Lon TP/FT-10	Multilux 180 DALI	Multilux 180 Lon TP/FT-10
Ordering number	DP.501100-010	MS.503201-000	MS.503200-000	MS.583000-000	ML.082002-003	DP.801110-00X DP.501110-00X	DP.801110-010 DP.501110-010	MS.602000-000	MS.082002-000	MS.082002-010	MS.582002-010	ML.082001-003	ML.082001-000	ML.62X000-000	ML.082001-001	ML.62X000-001
Mounting	Recessed	Recessed	Recessed	Recessed	Surface	Recessed	Recessed	Recessed	Recessed	Recessed	Recessed	Surface	Surface	Surface	Surface	Surface
Enclosure	Ceiling	Ceiling	Ceiling	Ceiling	IP65	Universal	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	IP65	IP65	IP65	IP65	IP65
Supply Power	95-250Vac 50/60Hz	95-250Vac 50/60Hz	95-250Vac 50/60Hz	95-250Vac 50/60Hz	DALI Bus	12-24 Vac/Vdc 95-250Vac	12-24 Vac/Vdc 95-250Vac	24 Vac/Vdc	DALI Bus	DALI Bus	95-250 Vac 50/60 Hz	DALI Bus	DALI Bus	24 Vac/Vdc	DALI Bus	24 Vac/Vdc
Technology	-	-	-	DALI	DALI	-	-	-	DALI	DALI	DALI	DALI	DALI	LonWorks	DALI	LonWorks
Channel	-	-	-	D1-D2	D1-D2	-	-	-	D1-D2	D1-D2	D1-D2	D1-D2	D1-D2	TP/FT-10	D1-D2	TP/FT-10
Motion sensor	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Light sensor	x	x	x	x	x			x	x	x	x	x	x*	x*	x*	x*
Temperature sensor	-	-	-	-		-	-	-					x*	x*	x*	x*
On/Off by Threshold	-	x											x*	x*	x*	x*
Constant Light Controller	-	-	x	x	x									x*		x*
Motion sensor area (*2)	6x6 m	6x6 m	6x6 m	6x6 m	22 m Ø	6x6 m	6x6 m	6x6 m	6x6 m	9x9 m	9x9 m	22 m Ø	13x13 m	13x13 m	18x0,5 m	18x0,5 m
Max. detection distance	10 m	10 m	10 m	10 m	14 m	9 m	10 m	8 m	10 m	10 m	10 m	14 m	18 m	18 m	20 m	20 m
Light sensor range	-	0 .. 2000 Lux	0 .. 1000 Lux	0 .. 1000 Lux	0 .. 500 Lux			0 .. 1000 Lux	0 .. 1000 Lux	0-1000 Lux	0 .. 1000 Lux	0 .. 500 Lux	0 .. 500 Lux	0 .. 500 Lux	0 .. 500 Lux	0 .. 500 Lux
Temp. sensor range														5 .. 45 ºC		5 .. 45 ºC
Digital Inputs	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Outputs 0-10V / 1-10V	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Relay Outputs	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Max. Relay current	10 Amp.	10 Amp.	10 Amp.					5 Amp.								
Transistor Outputs	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Inputs features																
Switch-on by pushbutton	-	x														
Switch-on by switch	-	x														
Scene switch function	-		x	x												
Dimming pushbutton	-		x	x												
Outputs features																
Switch-off timout	5 s to 30 min	5 s to 30 min	5 s to 30 min	5 s to 30 min	1 to 60 min	Fixed at 5 s	Fixed at 5 s	1 s to 50 min	Configurable		Configurable		Configurable	Configurable	Configurable	Configurable
General features																
Color	White	White	White	White	Grey	White / Aluminum	White	White	White	White	White	Grey	Grey	Grey	Grey	Grey
Dimensions	80x50 mm (DxH)	80x50 mm (DxH)	80x50 mm (DxH)	80x50 mm (DxH)	80x82x55 mm	87x79x32 mm	80x50 mm (DxH)	80x50 mm (DxH)	80x50 mm (DxH)	80x50 mm (DxH)	80x50 mm (DxH)	80x82x55 mm	80x82x55 mm	80x82x55 mm	80x82x55 mm	80x82x55 mm
Weight	80 g	80 g	80 g	80 g	250 g	90 g	80 g	80 g	70 g	70 g	70 g	250 g	250 g	250 g	295 g	295 g

NOTE: (*1) e-Sensor Noiseless product family ordering numbers: X = 1: White color
X = 3: Aluminum color

(*2) Read detailed information in datasheets

NOTE: Multilux product family ordering numbers: X = 1: Motion sensor
X = 3: Motion, light, temperature sensors

x*: Only avilable on Multilux models with light and temperature sensors

Sensors | e-Multisensor Auto

Stand-alone light dimming and switching

MS.583000-010

MS.583000-000
MS.503200-000
MS.503201-000

Lighting energy saving in offices

e-Multisensor Auto is a powerful digitally controlled multisensor range of products, designed to provide an stand-alone lighting control solution in buildings, in order to obtain an energy saving at the lowest installation and equipment cost. Including a motion sensor and a light sensor, both components combined provide multiple control applications in any building area. Three different models are available:

e-Multisensor AutoDim DALI and **e-Multisensor AutoDim 1-10V** are two innovative multisensors for automatic light dimming level on occupied zones. The ambient light level is measured by the light sensor to keep the luminaries at a constant value throughout the day according to a pre-defined light setpoint. This allows reducing the energy consumption of the installation at a minimum level. An auxiliary external input can be used for scene control (switch mode) or dimming control (pushbutton mode). The light level can be adjusted using the DALI protocol or the 1-10V output value depending on the device.

e-Multisensor AutoOnOff is a device for automatic lighting switching on control when movement is detected and the ambient light level is below a minimum pre-defined value. If the light level is over the pre-defined value, the device will keep the lights off even a movement is detected. An automatic light switching off is done in two ways: when the amount of natural light in the zone becomes over the pre-defined value even the zone is occupied or by timeout since the last detection. An auxiliary external input can be used for keeping the lights on (switch mode) or to temporarily trigger the lights on (pushbutton mode).

Stand-alone light dimming

Up to 75% energy saving

Detection area 36m^2

High detection sensibility

Auxiliary multifunction external input

Flush mounting in suspended ceiling

DATASHEET

Automatic light dimming and switching

e-controls®
electronic intelligent controls, s.l.

Energy Saving

- Constant Light Controller (AutoDim model)
- Light level setpoint setting
- Motion detector to switch off unoccupied areas
- Timeout setting for switching off occupancy relay
- External input for switch and trigger in AutoOnOff model or Scene and Manual dim in AutoDim model.
- Up to 75% energy saving

Models

- ON/OFF: May fix the light level from which the output relay is switched on when the area is occupied.
- AUTODIM: May regulate the light level of occupied zones to a pre-defined setpoint value.

Installation

- Direct connection from sensor to luminaire (see diagram)
- Flush mounting in suspended ceiling or with surface enclosure
- Adjustable timeout for output relay automatic switching off
- Minimum light level setting adjustment for automatic light switching on
- Lighting setpoint adjustable for automatic light dimming control

CE

Features

- Supply Voltage 95-250Vac 50/60Hz
- Relay output 10A/250V for motion sensor (models 1-10V and OnOff)
- Integrated DALI 35 mA power supply (DALI model)
- Timeout switching off: 5 s to 30 min, ON position to keep light switched on
- Detection area 6x6 m (installed at 3 m high)
- Max detection distance 8 meters
- 88 motion sensor detection zones
- Motion sensor coverage area 360°
- Isolated analog 1-10V output (AutoDim)
- Lux range 0 to 1000 lux (AutoDim), 0 to 2000 lux (AutoOnOff)
- Light sensor measurement angle +/- 50°
- Light setpoint setting for automatic dimming
- Light sensor with visible color correction radiation filter
- Flush mounting in suspended ceiling
- Dimensions 80x50 (ØxH, mm)

Ordering numbers

DP. 501100-010
e-Detector AutoOnOff

MS.583000-000
e-Multisensor AutoDim DALI

MS.583000-010
e-Multisensor AutoDim DALI Wide

MS.503200-000
e-Multisensor AutoDim 1-10V

MS.503201-000
e-Multisensor AutoOnOff

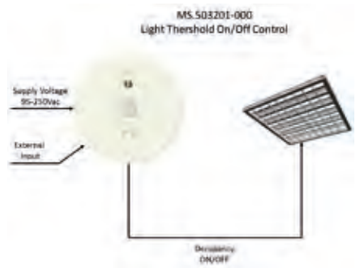
AC.000001-000
Surface mounting enclosure
See on page Accesories

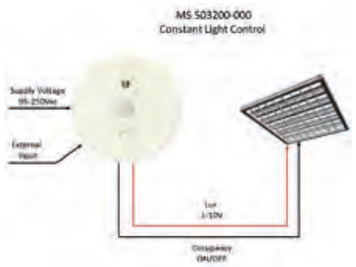
e-Multisensor AutoOnOff

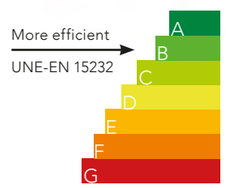
e-Multisensor AutoDim 1-10V

e-Multisensor AutoDim DALI

Input / Output Diagrams







DDS00135080000-0, MS.50320X-000 e-Multisensor Auto DDSEN

Sensors | e-Sensor Noiseless, Detector Noiseless

Motion sensors for noiseless ambients

DP.801110-000

Motion detection for room occupancy control

e-Sensor Noiseless and **e-Detector Noiseless** are two devices designed to detect persons in motion and used to switch off the climate and lighting systems to save energy when zones become unoccupied. The products are intended to be installed in zones like hotel rooms and offices, where it wants to avoid any mechanical noise of other conventional sensors, providing a high level of comfort for the guest.

Through an output signal of transistor type, the device offers a noiseless contact that closes the circuit any time the device detects motion, generating a short pulse to the control system that manages the climate and lighting of the zone. A potentiometer to adjust the motion sensitivity to any environment is included on the devices and allows installing the device in any place.

e-Sensor Noiseless is a flush wall mounting motion sensor with different finishing colors and **e-Detector Noiseless** is a ceiling mounting device for flush or surface mounting. Both models are available for operating voltages of 12-24Vac/Vdc and for mains electrical network at 95-250Vac.

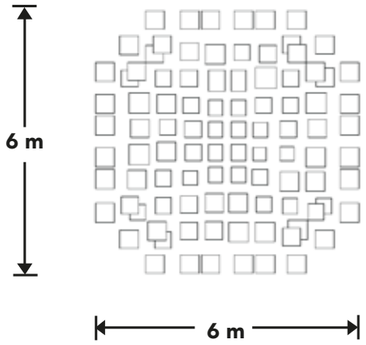
- Noiseless output transistor type
- High detection sensitivity
- Detection area 36m^2
- Adjustable detection sensitivity
- Wall or ceiling mounting

DATASHEET

Wall mount and ceiling mount motion sensors for hotel rooms and offices

e-controls® electronic intelligent controls, s.l.

Detection diagram



Coverage area

Altura Height (m)	Diámetro Diameter (m)	Area Area (m^2)
2,5	6	28
3,0	6,8	37
5,0	11	104
7,0	16	204
10,0	23	416

(*) At optimal sensitivity conditions

Features

- Supply Voltage:
  - Noiseless: 12-24Vac/Vdc
  - Noiseless Mains: 95-250Vac, 50/60Hz
- Detection area 6x6 m (ceiling model installed at 3 m high)
- Max. detection distance 8 meters
- Adjustable detection sensitivity
- Motion output:
  - Optotransistor type
  - Maximum voltage: +60V
  - Maximum current: 15mA
  - Activation time: Pulse fixed at 5 s.
- e-Sensor:
  - Wall flush mounting
  - Dimensions: 87x79x32 mm
  - Weight: 90 g
- e-Detector:
  - Ceiling mounting (flush or with surface enclosure)
  - Dimensions: 80x50 mm (DxH)
  - Weight: 70 g

CE

Ordering numbers

DP.801110-00X
e-Sensor Noiseless
Motion sensor for wall mounting, 12-24Vac/Vdc
X=0: White finished, X=1: Aluminum finished

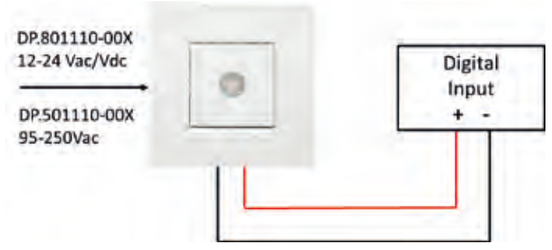
DP.501110-00X
e-Sensor Noiseless Mains
Motion sensor for wall mounting, 95-250Vac, 50/60Hz
X=0: White finished, X=1: Aluminum finished

DP.801110-010
e-Detector Noiseless
Motion sensor for ceiling mounting, 12-24Vac/Vdc

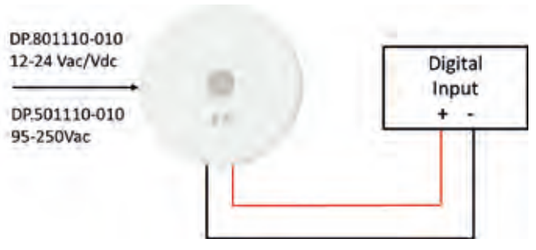
DP.501110-010
e-Detector Noiseless Mains
Motion sensor for ceiling mounting, 95-250Vac, 50/60Hz

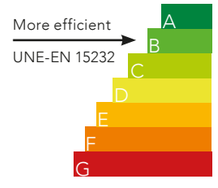
AC.000001-000
Surface mouting enclosure (P. 78)

e-Sensor Noiseless



e-Detector Noiseless





DDS0014525010-0, DP.801110-000 - e-Sensor Noiseless DDSEN

Sensors | e-Multisensor 0-10V

Light and motion sensor for control systems

MS.602000-000

Energy saving in buildings

e-Multisensor 0-10V is an innovative multisensor including a motion detector and a light sensor for occupancy control and light level monitoring in a zone of a building. The data is sent to a control system for further processing of the light and HVAC management, in order to ensure an optimum energy saving of the facility. The light level is measured by the device and provided to the control system for later processing. The motion sensor can be used for automatic light and HVAC on-off switching depending on the zone occupancy state, switching it off and saving energy when the zone is in unoccupied mode.

The device is designed for flush mounting on a suspended ceiling providing a wide coverage area of 36m2, making it an ideal solution for loft offices, with a high sensibility level to detect the smaller movements and optimizing its operating. Finished with an ultra slim case design and an innovative aesthetic design, the product is the perfect solution for engineers, architects and indoor designers that are looking an innovative and elegant design product.

A relay output for the motion detector signal with adjustable 1 second to 50 minutes timeout for automatic off switching is included on the device. The light sensor signal is provided by means of a 0-10V analog output.

Detection area 36m^2

High sensitivity

0 to 1000 lux range

Flush mounting in suspended ceiling

Relay output and 0-10V analog

Adaptable to any control system

DATASHEET

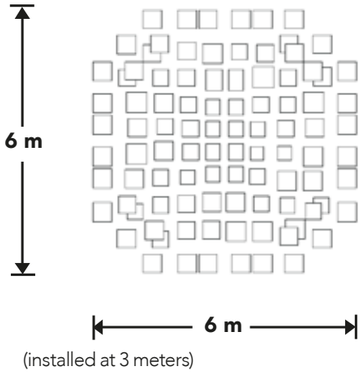
Motion and light sensors for energy saving in buildings

e-controls®
electronic intelligent controls, s.l.

Energy Saving

- Light sensor for light dimming
- Motion detector for occupancy management
- Adjustable relay output timeout 1 second to 50 minutes
- Automatic switching off lights when zone unoccupied
- Occupancy control HVAC management
- May integrate in any control system

Detection diagram



CE

Features

- Supply Voltage 24 Vac / 24 Vdc
- Relay output for motion sensor
- Timeout switching off relay 1 s to 50 min
- Detection area 6x6mts (installed at 3 m high)
- Max detection distance 8 meters
- 88 motion sensor detection zones
- Motion sensor coverage area 360°
- Light sensor 0-10V analog output
- Lux range 0 to 1000 lux
- Light sensor measurement angle +/- 50°
- Light sensor with visible color correction radiation filter
- Flush mounting in suspended ceiling
- Dimensions 80x50 (ØxH, mm)

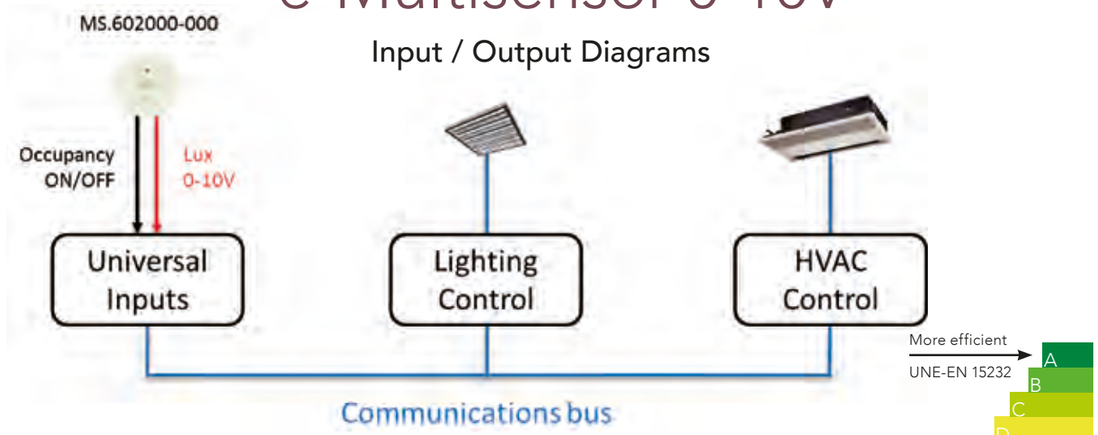
Ordering numbers

MS.602000-000
e-Multisensor 0-10V

AC.000001-000
Surface mouting enclosure

e-Multisensor 0-10V

Input / Output Diagrams



DDS0011508000-0, MS.602000-000 - e-Multisensor 0-10V DDSEN

Motion and light sensors for BMS applications

DATASHEET

Motion and light sensors for DALI controllers

e-controls®
electronic intelligent controls, s.l.

Lighting controls in buildings

e-Multisensor DALI is a family of multisensors for lighting control in DALI systems, based on a device for bus systems to operate with a gateway for bus management.

The device provides the motion sensor status instantly to the communication bus to allow a DALI gateway to switch on the lights with minimum delay. The light level is requested constantly from the gateway and is used to adjust the light level of the luminaries depending on the predefined lighting setpoint of the working area, to obtain the maximum energy saving as possible.

A patented mechanism based in two flanges fitted around the motion sensor lens, allows to adjust the covering area of the motion sensor depending on the device position, obtaining a better motion detection over the areas of interest and avoiding false detections in neighbouring areas. It can also be possible to adjust every flange separately, obtaining better results when the device is installed in zones like corridors, loft offices, etc…

The products are designed for flush mounting on a suspended ceiling providing a wide detection area of up to 9x9m (installed at 3 m high), making it an ideal solution for open space offices.

- Provides motion and light values to a DALI controller
- Motion detection area adjustable
- Detection area up to 13x13 m
- Up to 75% energy saving
- Ultra Slim design for suspended ceiling facility
- Motion sensitivity adjustable by potentiometer

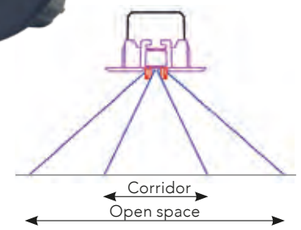
Ordering numbers

MS.082002-000
e-Multisensor Bus DALI

MS.082002-001
e-Multisensor Bus DALI
Anthracite

Features Bus DALI model

- Supply Voltage: DALI Bus (16 Vdc)
- Power consumption: 4,5 mA
- Detection area 6x6mts (at 3 m high)
- Max. detection distance 8 meters
- 88 motion sensor detection zones
- Motion sensor coverage area 360°
- Motion sensitivity adjustable by potentiometer
- Lux range 0 to 1000 lux
- Light sensor measurement angle +/- 50°
- Light sensor with visible color correction radiation filter
- Flush mounting in suspended ceiling or surface enclosure
- Dimensions 80x50 (ØxH, mm)



Installation height	Detection diameter	Detection width corridors
2,0	5,0	3,6
2,5	5,5	3,8
3,0	6,0	3,9
3,5	7,0	4,0
4,0	7,5	5,5
5,0	8,0	6,5

NOTE: Dimensions in meters

MS.082002-010
e-Multisensor Bus DALI Wide
Supply Voltage: DALI Bus (16 Vdc)

MS.582002-010
e-Multisensor Bus DALI Mains Wide
Supply Voltage: 95-250 Vac 50/60 Hz

Installation height	Detection diameter
2,0	6,0
2,5	7,5
3,0	9,0
3,5	10,5
4,0	12,0
5,0	13,5

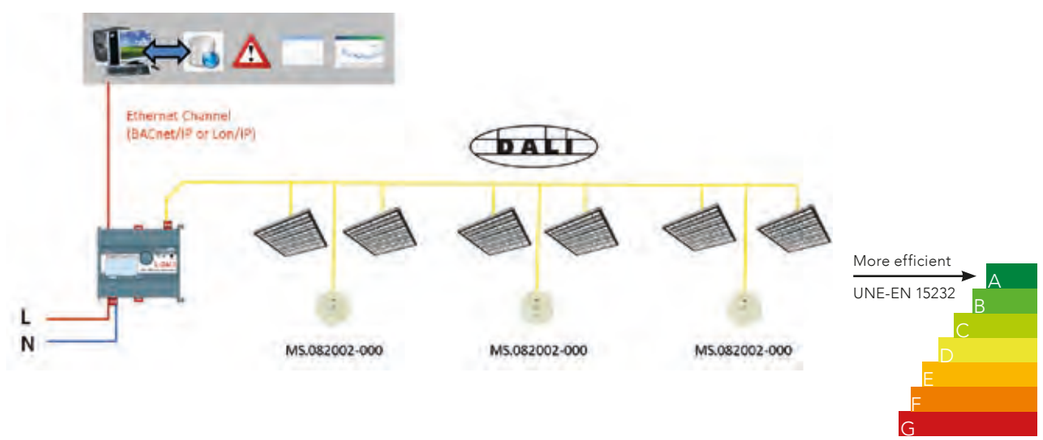
NOTE: Dimensions in meters

Features

- Detection area 9x9mts (at 3 m high)
- Max detection distance 8 meters
- 111 motion sensor detection zones
- Motion sensor coverage area 360°
- Motion sensitivity adjustable by potentiometer
- Lux range 0 to 1000 lux
- Flush mounting in suspended ceiling or surface enclosure
- Dimensions 80x50 (ØxH, mm)

e-Multisensor Bus DALI

Input / Output Diagrams



DDS00155I2000-0, MS.082001-000 e-Multisensor Bus DALI DDSEN

Sensors | Multilux Bus

Multisensor for high-bay applications

DATASHEET

Automatic light dimming and switching
for industrial applications

e-controls®
electronic intelligent controls, s.l.

MI.08200X-003 ML.623000-000 ML.623000-001

Lighting energy saving in large areas

Multilux Bus is an innovative multisensor designed to be installed in large areas like industrial buildings, freezing areas, airports, outdoor lighting, etc., providing a lighting control based on motion detection and lighting dimming, giving a high energy saving switching lights off in unoccupied zones and dimming lights depending on the setpoint configured.

An accurate motion sensor allows installing the device up to 18 metres height, being an ideal product for logistic areas and other buildings with occasional people working on it, where lights can be switched off to improve energy consumption. Three different models are available: The High-Bay model for large detection areas, the 360° model for medium detection range and the third model for 180° detection area, specially indicated for aisles and corridors. An integrated lighting sensor measures the light level on the zone and dims the lights depending on the daylight level inside the building and setpoint configured.

Two product family are available: One for DALI networks and one for LonWorks TP/FT-10 networks. The LonWorks models include in integrated constant light controller for lighting control and a temperature sensor.

The device can operate down to -25°C and is mounted in an IP65 surface mounting enclosure, designed to be installed in hostile environments like freezing warehouses and outdoor lighting.

Height detection up to 18 metres

Motion sensitivity adjustable by network

Lighting range 0 to 500 lux

Operating range -25°C a +50°C

IP65 surface mounting enclosure

Energy Saving

- Motion sensor to switch off unoccupied zones
- Light sensor for automatic light dimming
- Light threshold to switch off non-dimming luminaries
- Temperature sensor for climate control

Models

- DALI: For DALI networks
- DALI Master: For stand-alone DALI applications
- Lon TP/FT-10: LonWorks twisted pair to connect to DALI gateways or 1-10V outputs
- Lens 360°: Omni directional detection
- Lens 180°: Linear coverage for aisles
- Lens High-Bay: High-Bay and Omni directional

Features

- Supply Voltage:
  TP/FT-10: 24Vac/Vdc
  DALI: 16Vdc DALI supply, 4,5mA
- Motion pyroelectric sensor of 4 elements
- Maximum detection distance 18 meters
- Coverage detection angle 180° or 360°
- Light sensor range: 0 to 500 lux
- Light sensor resolution: 12 bits
- Light sensor measurement area +/- 50°
- Detection sensibility adjustable by bus
- Light level setpoint setting by bus
- Light sensor with visible colour correction radiant filter
- Surface mounting
- Protection level IP65
- Dimensions and weight
  Model 360: 80x82x55mm, 250 gr.
  Model 180: 80x82x85mm, 295 gr.
  Model High-Bay: 80x82x55mm 250 gr.

Ordering numbers

ML.082002-003
Multilux High-Bay DALI Master

ML.082001-003
Multilux High-Bay Bus DALI

ML.082001-000
Multilux 360 DALI

ML.082001-001
Multilux 180 DALI

ML.623000-000
Multilux 360 Lon TP/FT-10

ML.623000-001
Multilux 180 Lon TP/FT-10

Detection coverage area

Multilux 360	Height	Diameter
	3	6
	4	8
	6	11
	8	13
	10	13
	>12	9

Multilux 180	Height	Length	Width
	3	6	1,4
	4	8	1,2
	6	11	1,0
	8	12	1,0
	10	15	0,5
	>12	18	0,5

Multilux High-Bay	Height	Diameter
	5	10
	6	11
	8	13
	10	16
	12	19
	14	22

Multilux Bus

CE

Input / Output Diagrams

Solution with DALI Controller and DALI multisensor

Solution with integrated CLC in Multilux High Bay DALI Master

Solution with DALI Controller and LonWorks multisensor

LonMark Functional Profiles

Light Sensor, Presence Detector, Occupancy Controller, Constant Light Controller, Temperature Sensor

DDS00014516000-0 – Multilux Bus

Industry | e-Controller 2In2Out Autoinstall

Switching contacts remote control through the mains electrical network

DATASHEET

Remote sensors control and relay outputs with no new wires

e-controls®
electronic intelligent controls, s.l.

Application:

1 Water Treatment Plant

EC.512207-000

Inputs and outputs remotely controllable with no new wires

The **e-Controller 2In2Out Autoinstall** is a device designed to do a remote control of its outputs relays from the input contacts of an equivalent remote e-Controller. With this system it is possible to monitor the input status of the remote device watching at the values on the outputs of the near device.

A data transmission system that takes the advantage of using the mains electrical network as a transmission channel is used on the device to communicate with other devices, making it particularly interesting on places where additional wires are difficult or impossible to install for cost reasons.

The digital inputs of the device can be configured to work as pushbuttons or switch contacts. Some pushbuttons and led indicators are included on the front panel of the device to test the outputs and monitor the inputs status. An auto-installation mechanism is included on the device for input and output logical connections up to 26 devices, with no computer required for commissioning.

The system has multiple applications both in industry and buildings: water level status monitoring in pump wells, motor on-off remote control, machinery switching on and off, etc.

Input contacts remote monitoring

Relay outputs remote switching

No computer required for commisioning

No additional wiring required for data transmission

Robust and reliable transmission

LonWorks® network

Remote Control

- Input contacts status monitoring
- Remote outputs direct control
- Data transmission reliable

BMS monitoring and control

- Inputs status monitoring in SCADA application
- Output relay status control

Integration

- ISO/IEC 14908 LonWorks® network
- LonMark® compatible

Installation

- Data transmission using the mains electrical network
- No computer required for commisioning

Features

- Supply Voltage 95-250Vac 50/60Hz
- Two phase contact digital inputs
- Digital inputs configurable as pushbutton or contact
- Two phase contact 5Amp relay outputs
- Input status LED indicators
- Outputs test pushbuttons and outputs status LED indicators
- Auto-intallation mechanism between e-Controllers
- Mains electrical network for data transmission (PowerLine)
- ISO/IEC 14908 LonWorks® network
- LonMark® Open Systems integrable

Ordering number

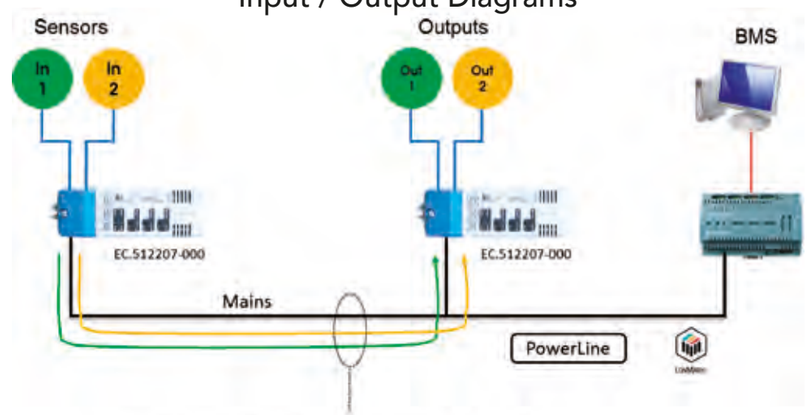
EC.512207-000
e-Controller 2In2Out Autoinstall

LONMARK®

CE

e-Controller 2In2Out Autoinstall

Input / Output Diagrams



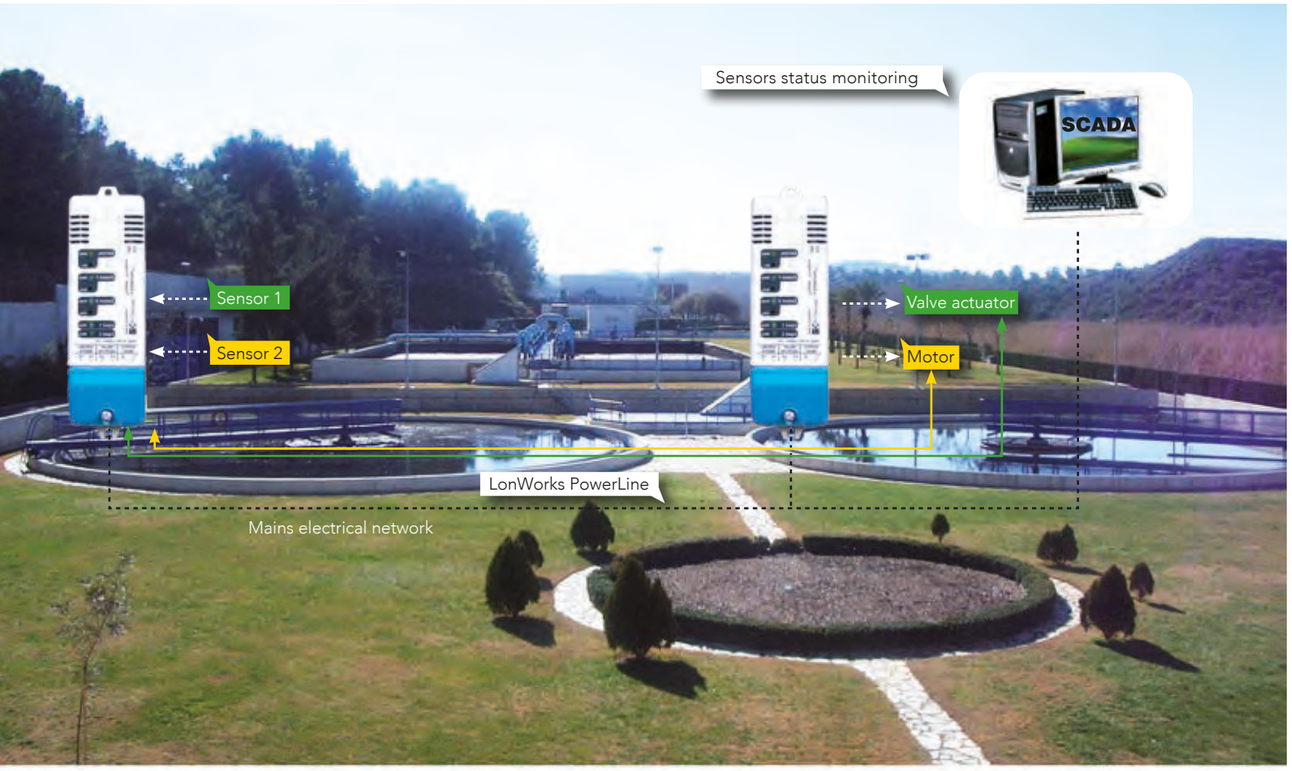
Transmission of multiple signals through the mains

DDS00135010000-0_EC.512207-000 e-Controller 2E2S Autoinstall DDSEN

Industry | e-Controller 2In2Out Autoinstall

Remote sensors control through the mains electrical network

1 Application Water Treatment Plant



Control signals transmission using the mains electrical network

The aim of this application note is to transmit the sensors status signals connected to an e-Controller device to another remote e-Controller device that will show on its relay outputs the inputs status connected on the first device. The main advantage of this application note is the control transmission system between the e-Controller devices which are using the mains electrical network, preventing to install new wires for the communication, which in most cases are not possible.

Two digital inputs are available on the **e-Controller 2In2Out Autoinstall** device to which different sensors are connected for the plant control, with the aim to transmit the inputs status to another e-Controller with two relay outputs available to monitor the inputs status of the remote e-Controller. No computer is required for commissioning since an advanced algorithm is included on the e-Controller devices to automatically configure the logical addresses between the digital inputs of one e-Controller transmitter and the output or outputs of one or more e-Controllers receivers. This mechanism is done using the mains electrical network and can be extended with up to 26 different devices with the auto-installation system.

Multilple signals through the mains electrical network

Robust and reliable transmission

No computer required for commisioning

Robust and reliable transmission

SCADA application for signal monitoring

ACCESSORIES

e-controls® electronic intelligent controls, s.l.

Frames for e-Touch Display (not included in the product, order separately)
Dimensions: 142x86x8,5 mm

Ordering numbers:		
	White frame	FR.000100-010
	Black frame	FR.000102-010

Frames for e-Touch Flexi (included in the product)
Dimensions: 86x86x8,5 mm

Ordering numbers:		
	White frame	FR.000100-000
	Black frame	FR.000102-000

Frames for e-Touch Panel (included in the product)

Dimensions: 86x142x8,5 mm

Ordering numbers:		
	White frame	FR.000100-001
	Black frame	FR.000102-001

Frames for e-Room (not included in the product, order separately)
Dimensions: 142x86x8 mm

Ordering numbers:		
	White frame	LNA4804BI
	Aluminium frame	LNA4804TE
	Black frame	LNA4804AR

Flush mounting enclosure for e-Room, e-Touch Display (not included in the product, order separately)
Dimensions: 133x74x53,5 mm
Ordering number: 504E

Window contact, door contact. Plastic finished.
Dimensions: D19 x 34 mm
Ordering number: CVP-NC

Window contact, door contact. Brass finished.
Dimensions: D8 x 13 mm
Ordering number: CVL-NC

Drawings not to scale

ACCESSORIES

Surface mounting enclosure for **e-Display**

Description: Use this surface mounting enclosure for the e-Display when not possible to install in flush mounting.

Dimensions: e-Display: 137x81x33 mm, e-Display Plus: 152x87x27 mm

Ordering numbers:	e-Display	AC.000010-000
	e-Display Plus.	AC.000011-000
	e-Touch Display White	AC.000030-000
	e-Touch Display Black	AC.000030-002

Surface mounting enclosure for **e-Multisensor**

Description: Use this surface mounting enclosure for the e-Multisensor product family when no suspended ceiling is available to install the device.

Dimensions: 83x68 mm (ØxH)

Ordering number: AC.000010-000

e-Temp: Flush mounting temperature sensor

Description: One NTC 10K output compatible with e-Room and e-Room Plus HVAC room controllers analog input.

Ordering numbers:

Pure white front panel - Bticino Light	AC.000100-000
Mat aluminium front panel - Bticino Light	AC.000100-001
Pure white front panel - Simon S.82	AC.000101-000
Mat aluminium front panel - Simon S.82	AC.000101-0

Power supply 24 Vdc for e-Room products

Input voltage:	85-264 Vac 47/63 Hz
Output voltage:	24 Vdc, 0,63 A (15 W)
Dimensions:	18x90x55 mm (WxHxD)
Ordering number:	FA-15W-24V

Plug-in power supply for AirQualy

Input voltage:	90-264 Vac 47-63 Hz
Ouptut voltage.	12 Vdc / 1,0 A
Ordering number:	FAP-12W-12V

Surface table mounting enclosure for AirQualy

Dimensions:	100x100x53 mm
White finished	AC.000040-000

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ISBN: 9788409368501