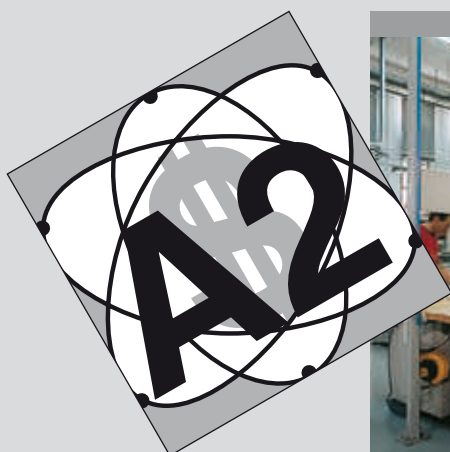
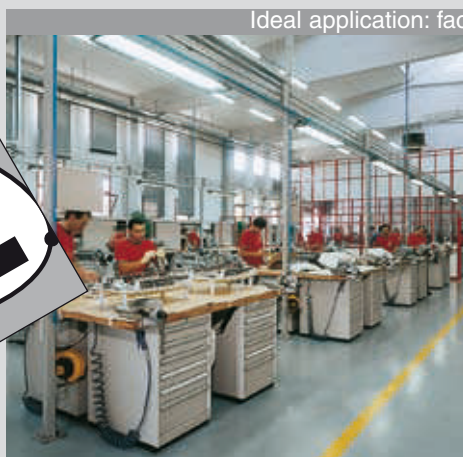




Ideal application: open space



Ideal application: factories, warehouses, supermarkets

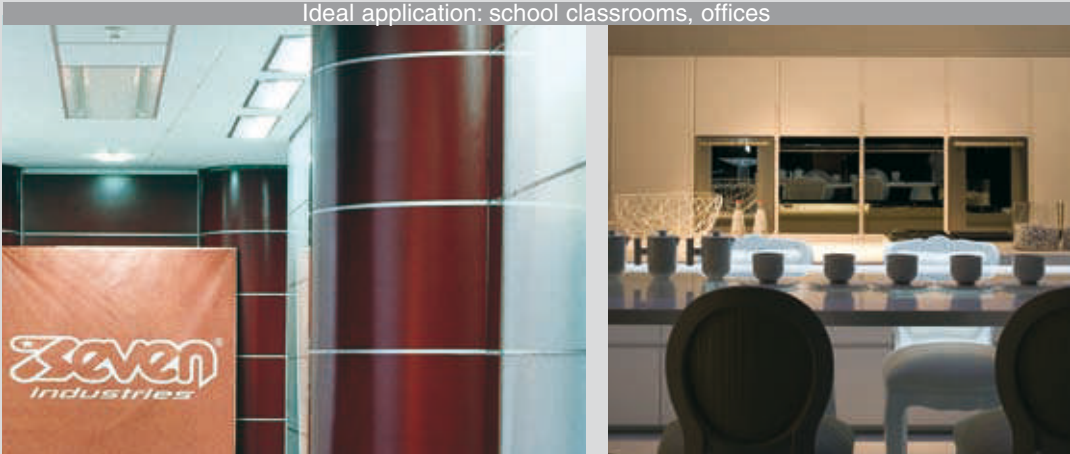


Ideal application: conference rooms, medium-sized offices



The use of an automatic control system designed to exploit natural light allows the optimal management of a lighting system. A dimmable control system allows switching the lights on when actually required, with added economic advantages, comfort and energy saving.

Ideal application: school classrooms, offices



DIMMABLE
ELECTRONIC

OFFICES:

- high number of offices with differing uses.
- differing levels of natural light on the various floors due to differences in heights.

SCHOOLS

- high number of classrooms
- rooms used for different purposes (canteen, gym, library, kitchen, staff rooms, etc.) with differing lighting needs according to timetables, seasons, exposure to natural light

INDUSTRIAL PLANTS OR SHOPPING CENTRES

- possibility of making use of available natural light from windows, skylights or structural glass walls.
- areas that on the contrary are totally dark.

**ELECTRONIC BALLASTS = ENERGY SAVING****40-50%****LAMPS LAST LONGER**

The average life of the lamps increase by approximately 40-50% and costs for purchasing lamps are cut, since they need to be replaced less frequently also cutting down maintenance cost.

**OBSENCE OF NOISE AND HUMMING**

Both when the lamps are lit and during operation; this increases the auditory comfort in rooms where fluorescent lamps with electronic gear are installed.

≥ 26 KHz**QUALITY OF THE LIGHT**

High frequency operation (= 26 KHz) gives a "continuous light" effect which certainly proves to be less tiring for eyes.

**SIMPLIFICATION OF THE WIRING GEAR**

Conventional gear includes: inductive ballast, capacitor and starter. An electronic ballast is a power supply incorporating all the functions of these components.

**"STEADY" LIGHT**

No streaks and flickering during normal operation, during adjustment and when the lamp is coming to the end of its life.

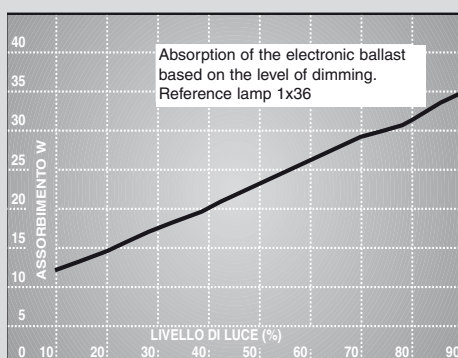
No stroboscopic effect.

0.98**POWER FACTOR**

It is higher than 0.98 at the maximum level

**LOWER OPERATING TEMPERATURE**

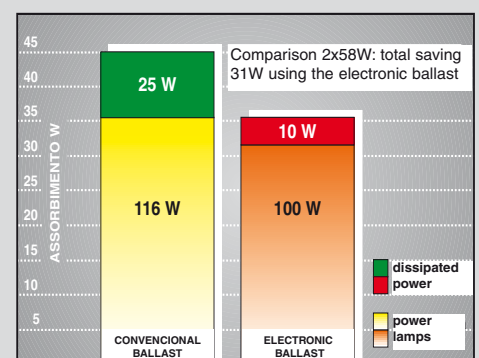
The lower power losses compared to those of an inductive type of ballast (due to dissipated heat) result in lower dissipation of heat into the environment.

**ENERGY SAVINGS****average: 25/30%**

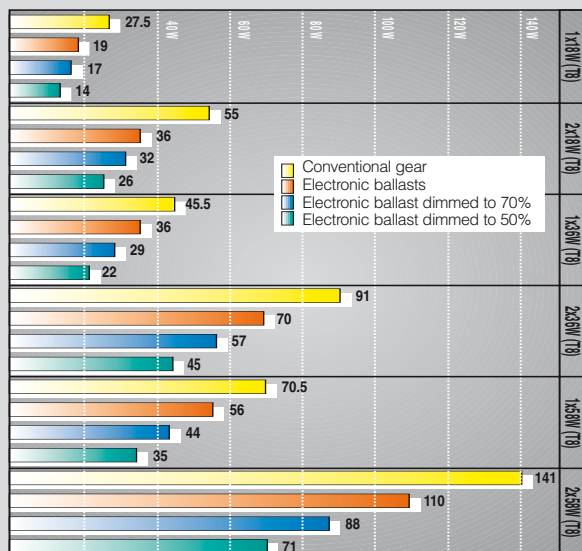
ENERGY SAVINGS are provided mainly by:

- lower power losses (due to dissipated heat) compared to conventional inductive ballasts
- higher lamp efficiency: the high frequency power supply increases the efficiency by about 10%

Changing from fixtures with conventional (ferromagnetic) ballasts to those fitted with electronic ballasts offers an immediate 25-30% power saving, limits maintenance costs (replacement of starters) and those for changing lamps (the average life of which increases by 40-50%). If, on the contrary, you opt for fixtures with dimmable ballasts there are benefits additional to the power savings (which can increase significantly according to the level of dimming).



COMPARISON OF BALLASTS



In addition to the unique qualities already listed for fixtures wired with electronic as opposed to conventional ballasts, wiring with DIMMABLE ELECTRONIC BALLASTS gives extra advantages both in terms of operation as well as comfort power savings.

DIMMABLE SYSTEMS = LIGHTING QUALITY

DIMMABLE ELECTRONIC BALLASTS

are sophisticated fully electronic power supplies which permit dimming of the intensity of T8 series fluorescent lamps (18, 36 or 58W single or double lamps).



ADJUSTMENT RANGE FROM 1 TO 100%.

dimming to 60% = from 38W to 26 W = 30% savings
 dimming to 40% = from 38W to 20 W = 50% savings
 (added to the advantages of conventional electronic ballasts)

1
100%

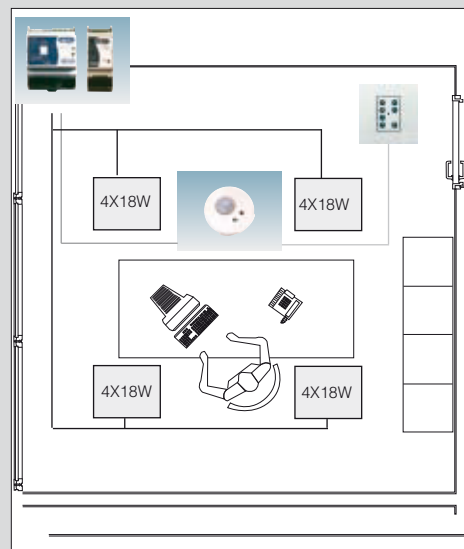
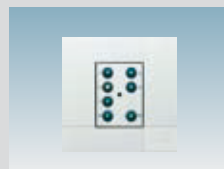
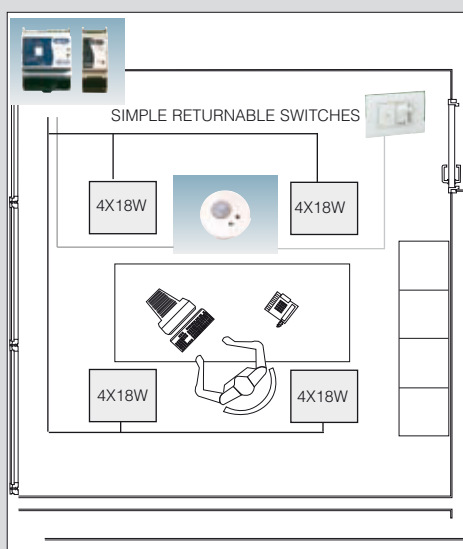
LIGHT CONTROL SYSTEMS ON SALE

The standard electronic dimmable ballasts (featured in the catalogue) that we use for our luminaires are 1-10Vdc type, i.e., light is adjusted by varying the voltage of the control circuit from 1 to 10 V (the lighting fixtures can be equipped with DALI ballasts using sub-code 41).

DIMMABLE ELECTRONIC BALLASTS

1-10Vdc (analogue ballasts)
 DALI (digital ballasts)

PROJECT EXAMPLE WITH 1-10 V



DIMMABLE
ELECTRONIC

Selection of the control system to use:

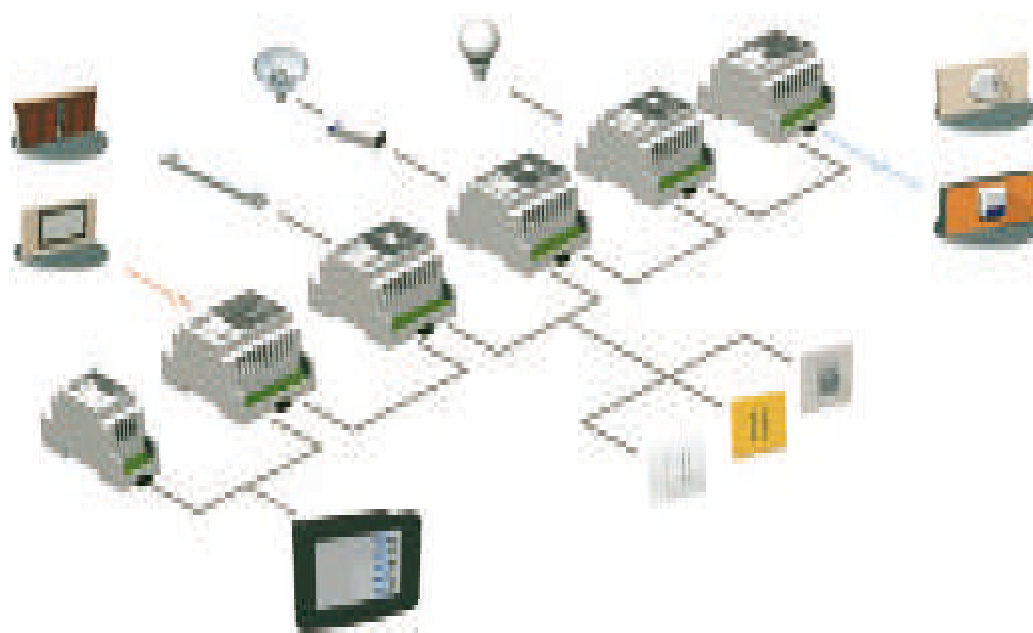
We suggest the following control systems based on customer requirements:

- Manual: potentiometer control, push-button control
- Automatic
- Automatic and manual
- Remote control
- Push-button panel with set light backgrounds

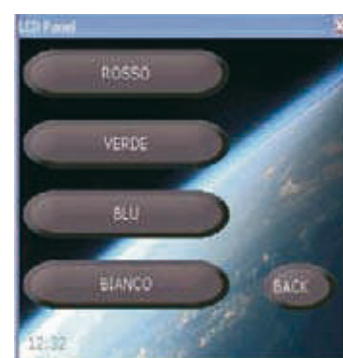
Touch Panel (codice 986581)

Principal features:

- 3.5" LCD, high resolution colour screen
- Selection from a range of wallpapers and easy-to-use keys
- Up to 500 screens with different functions can be programmed
- Can be used either with the IMAGE system or with the DIGIDIM system
- Scenarios can be set in automatic mode based on the time
- 3.5" LCD, high-resolution colour screen
- Protection password to avoid unauthorised access
- Integrated infrared receiver
- Includes box for recess mounting.



For further information, please contact headquarters.



DIGIDIM LIGHT CONTROL SYSTEM

The DIGIDIM light control system is extremely flexible and the wide product range available is designed to meet any light control requirements. Light can be controlled through a multisensor, push-button panels, cable entry modules with standard push-buttons or 3.5" TouchPanel LCD. Different light settings can be created using DIGIDIM devices, improving comfort and adding a dynamic quality to space. A control system designed to allow flexible use is required in meeting rooms, in addition to suitable lighting planning. The system can be used anywhere (offices, open spaces, warehouses, etc.), where energy saving and visual comfort are required.



The DIGIDIM system is based on the DALI protocol. Its main features are:

- Distributed memory (no central unit in place).
- Maximum 63 nodes (DEVICES) per system.
- Individual directions
- Control of 16 groups (channels).
- Storage of 16 "settings".
- Storage of the transition time.
- Interface option available with other systems through RS232.
- Up to 300 m long bus with standard bus 2x1.5 sq mm.

HOW TO MAKE A DIGIDIM SYSTEM:

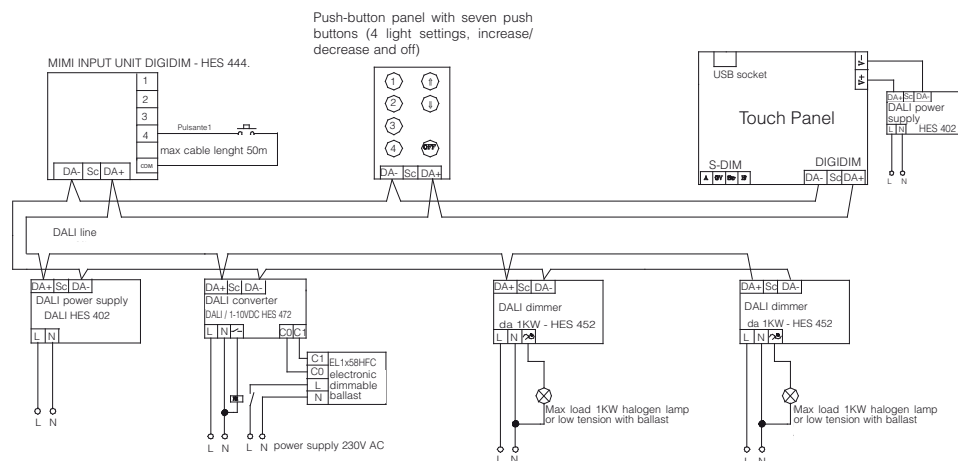
1) The system requires a ballast for the bus HES402 to work.02

2) Select the number and type of power modules requires. For instance: two dimmer switches HES452 and a converter HES472 should be used to control two 700W halogen lamps and a circuit with 40 electronic ballasts that are controlled through 1-10V DC. Note: Any DALI ballasts should be linked directly to the bus.

3) Select the type and number of user interfaces to control the system. Example: a Touchpanel can be used for a meeting room by the stage (and related ballast), a push-button panel in the control room and a push-button usually open (and connected to the input unit module) by the entrance.

4) Simply connect everything as shown in the scheme and set.

CONNECTION SCHEME



Touch Panel

(codice 986581)

**SPEAKER PRESENTATION**

Example of application using switched on fluorescent lamps only, suitable for meeting rooms with projection of slides and for drawing the attention to the speaker.

**SCREEN (VDT) PRESENTATION**

Example of application using DICR lamps only, suitable for meeting rooms with the projection of slides and where light points to the images projected.

**MEETING**

Example of application using fluorescent lamps switched on and DICR, suitable for meeting rooms.

**MEETING AND DISCUSSION**

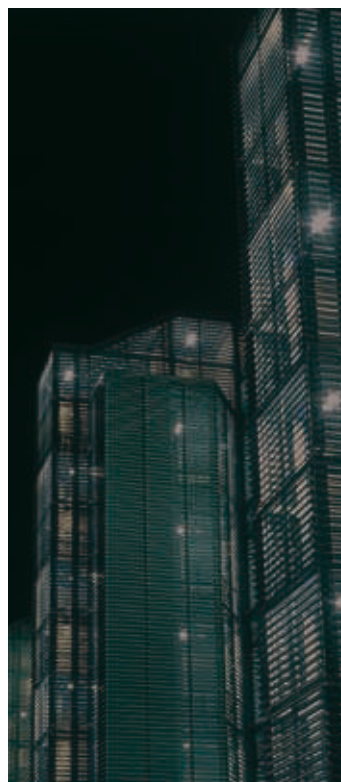
Example of application using DICR lamps and side lamps only, suitable for meeting rooms.



DISANO kits are designed for controlled illuminance, enhancing energy saving values and making the environment more comfortable.

Kits from 1 to 7 provide manual or automatic adjustment (with constant light sensor) of fluorescent illuminants with dimmable electronic ballasts (1-10 V DC), while kits 8 and 9 are used with incandescence or halogen lamps. The constant light sensor measures the light in the environment and maintains the lighting level constant, modulating the artificial light according to the amount of natural light available. The sensor must be installed on the ceiling of the room to be lighted, in a strategic position in relation to external light sources.

Kit 4 enables light control through a pushbutton, normally open.



Kits 5 and 6 are equipped with a multi-sensor which, in addition to the constant light sensor, also includes a presence sensor and an infrared receiver.

Kits 7 to 9 enable the setting of four light levels, manual adjustment and switch-off, for total comfort and flexibility of the controlled environment.

Kits 4 to 9 are based on the new DALI standard, which thanks to digital technology provides a simplified 2-cable wiring to connect the system devices.

A remote control can be added with kits 6 to 9. The kits are easy to install and extremely simple to use. If equipped with series sc. HELVAR controllable electronic ballasts, can also be controlled through a simple pushbutton (switch on/switch off and adjustment functions).

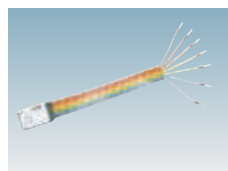
USER INTERFACE - CONTROL UNIT



acc. 580 multi-sensor	
white	986573
Incorporates a proximity sensor, a constant light sensor and an infrared receiver. To plan the constant light sensor have to use the remote control.	



push-button	
white	986544
Push-button panel with seven push buttons (4 light settings, increase/decrease and off), white, DIGIDIM system, with frame and white cover for Italian boxes (503 type).	



acc. 582 mini input	
	986575
Enables interaction with a Dali system using normally open buttons or timers. Input module mini input unit (4 inputs), the functions of the inputs can be modified by the Toolbox software.	



acc. Remote control cod. Disano	
	986533
To be used with kits 6 to 9, for setting 4 light levels, increase, decrease, and off. Infrared remote control for monitoring and basic programming system DIGIDIM.	



acc. 587 DIGIDIM Toolbox	
	986580
DIGIDIM configuration and programming software fitted with serial interface and programming plug.	

CONTROL DEVICES - POWER MODULES



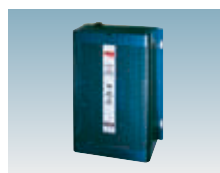
acc. 581 DALI power supply	
	986574
DALI network power supply, for 250mA installation on track DIN (2 modules).	



acc. 585 DALI converter	
	986578
To control 1-10V or DSI analogue electronic ballasts via a DIGIDIM system. The converter controls up to 50 electronic ballasts if it is accompanied by an external wattage relay (not included).	



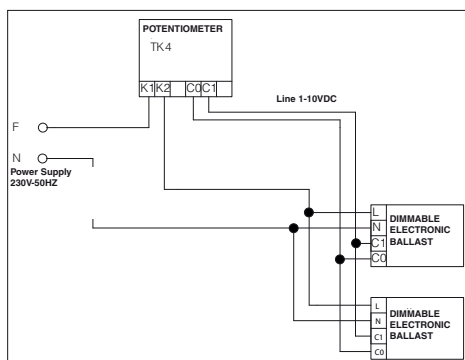
acc. 586	
	986579
Relay unit with 4 separate groups, 4A resistive, installation on DIN rail (5 modules). The use of power meters is recommended to control the load. Always place power relay and fluorescent modules on the discharge.	



acc. 584 16A DALI dimmer	
	986577
From 3.6 kw for incandescent lamps, mains voltage or low voltage halogen lamps (with ferromagnetic transformers).	



acc. 583 universal dimmer	
	986576
From 1 kw for incandescent lamps, mains voltage or low voltage halogen lamps (with electronic transformers).	



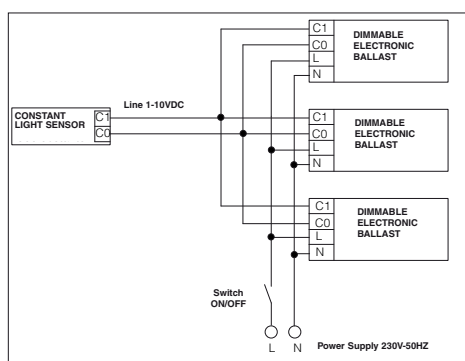
1 to 20 ballasts
automatic control



Manual control kit for up to 20 dimmable ballasts, composed of: adjustable potentiometer with ON-OFF switch integrated in a standard cover plate (for recessed box type 503).

KIT 1 - manual

colour	code
anthracite grey	986519
white	986520



1 to 15 ballasts
automatic control



Automatic control kit for up to 15 dimmable ballasts, composed of: constant light sensor and bracket for direct installation onto the fixture's fluorescent tube. Recommended for open fixtures. For closed fixtures (shield, glass or diffuser) please contact our Headquarters regarding compatibility. Constant light sensors may also be installed on ceilings. Size Ø 18mm.

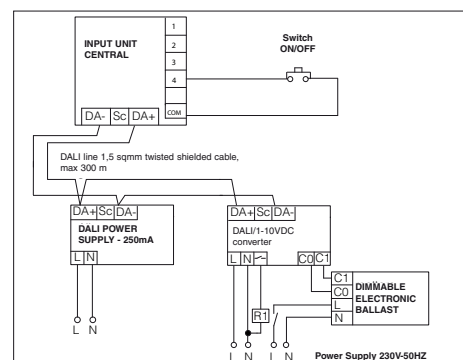
KIT 2 - automatic

colour	code
white	986521

Pushbutton control kit with on/off and adjustable functions for up to 50 dimmable electronic ballasts (using a power relay not included in the kit). The interface card must be installed near the pushbuttons, as the wires should not be extended. C1, C0 converter exit allows to control max 50 electronic ballasts at 1-10V DC. R1 = power Relay to be measured in the load function.



KIT 4 - push button control	
colour	code
	986570

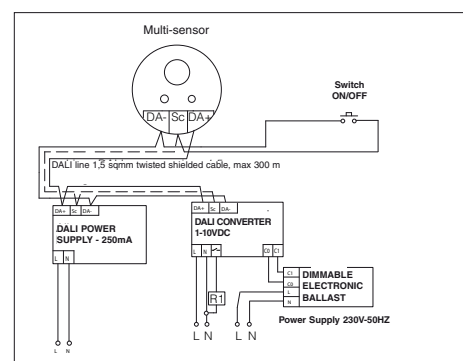


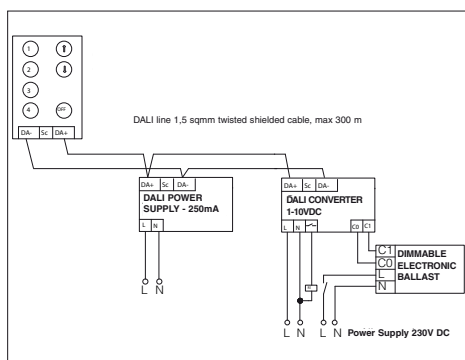
Control kit with function multi-sensor, presence sensor, constant light sensor and infrared receiver for up to 50 dimmable electronic ballasts (using a power relay not included in the kit). The kit provides manual adjustment and on/off switching through a simple pushbutton, normally open.

NOTE: Remote control required for constant light level setting.

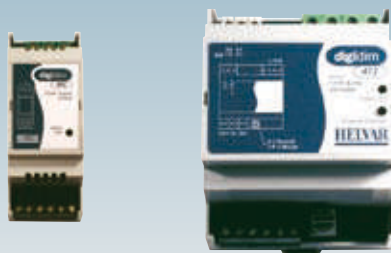


KIT 6 - multi-sensor	
colour	code
	986571





1 to 50 ballasts
automatic control



Control kit with 4-light level button panel, increase, decrease and off; the button panel includes an infra-red receiver. For control of up to 50 dimmable ballasts (using a power relay not included in the kit).

NOTE: For dual control, add button panel 986544.

KIT 7 - manual

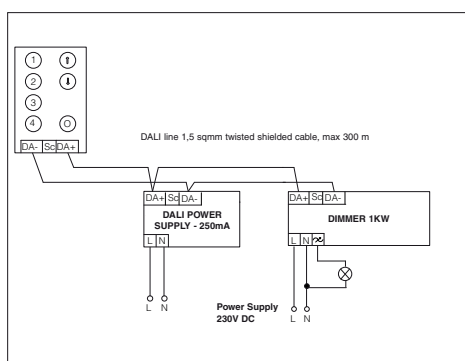
colour	code
	986532



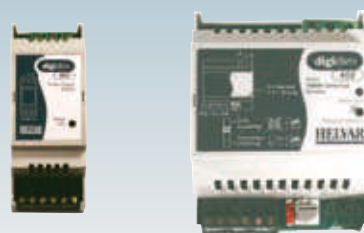
Button panel only

bianco	986544
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Push-button panel with seven push buttons (4 light settings, increase/decrease and off), white, DIGIDIM system, with frame and white cover for Italian boxes (503 type).



max. load
1000 W



Control kit with 4-light level button panel, increase, decrease and off; the button panel includes an infra-red receiver. **For control of up to 800W low-voltage incandescence or halogen lamps with electronic transformer.**

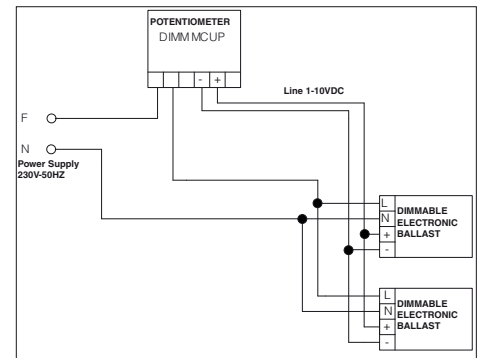
KIT 8 - manual

colour	code
white	986572

Manual control kit for up to 50 dimmable power supplies, composed of electronic potentiometer with integrated utility line switch.



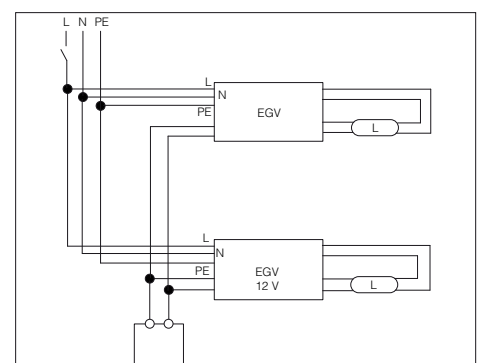
KIT 1 - DIM MCUP	
colour	code
white	986538

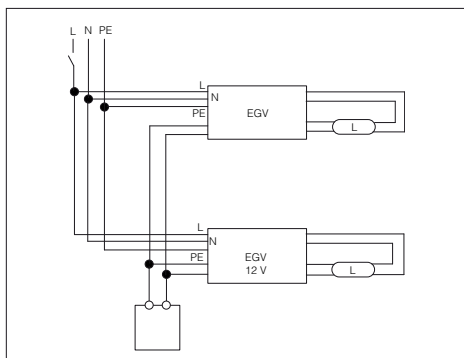


Automatic control kit for up to 5 dimmable power supplies, composed of: constant light sensor and bracket for installation onto fluorescent tube T8 or T5.



KIT 2 - DIM PICO	
colour	code
white	986524





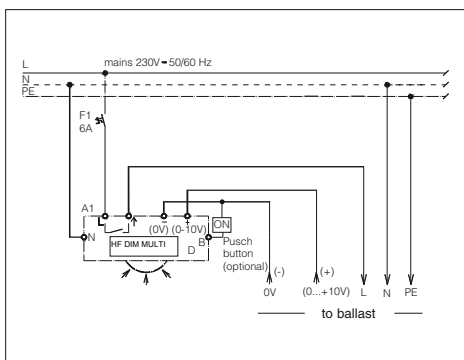
1 to 100 ballasts automatic control



Automatic control kit for up to 100 dimmable power supplies, composed of: constant light sensor and bracket for ceiling installation.

KIT 3 - DIM MICO

colour	code
	986536



1 a 50 ballasts automatic control



Automatic control kit with ceiling mounted multi-sensor, brightness and/or presence sensor (up to 100 power supplies), with automatic switch-off function after a set interval of 3 minutes. For on-off switching of up to 50 power supplies (depending on power). On/off switching and light level setting through a simple release button (not included in the kit). Manual sensor adjustment, no remote control required.

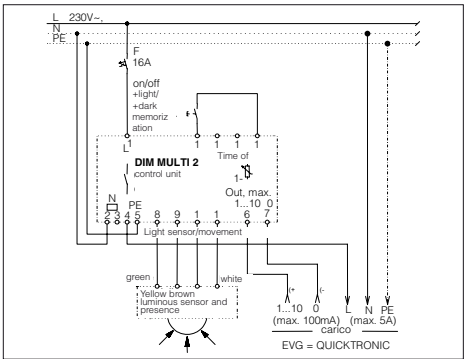
KIT 5 - DIM MULTI

colour	code
white	986534

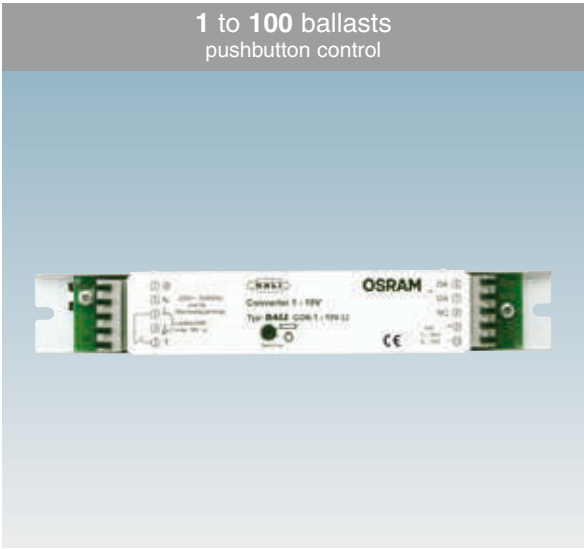
Automatic control kit with multi-sensor, brightness and/or presence sensor, with automatic switch-off function after a set interval of 3 minutes. For on-off switching of up to 30 dimmable power supplies. On/off switching and light level setting through a simple release button (not included in the kit). Manual sensor adjustment, no remote control required.



KIT 6 - DIM MULTI 2	
colour	code
	986535



Control kit with pushbutton (not included in the kit). The kit controls up to 100 dimmable power supplies for max. 30 power supplies.



KIT 7 - DALI WITH 1-10 LI	
colour	code
	986539

