

## SPECIFICATIONS

- Battery: NiCd 7V 0,75Ah
- Power supply voltage: 230V
- Max. input from mains: 10Va

## WARNINGS / WARRANTIES

- Before connecting this appliance, check that the rating plate data correspond to the mains data.
- This appliance must be used solely for the purpose for which it was built. Any other use is to be considered as improper, and may cause damage. The manufacturer will not be liable for any damage to human beings, animals or properties caused by improper, wrong or unreasonable use.
- Before any cleaning or maintenance operation, disconnect the appliance from the mains.
- Warning: this product contains materials that can be harmful if leaked/dumped in the environment.
- Beghelli products are covered by laws on intellectual property.
- Should any repairs be necessary, contact an authorised service centre and always request the use of original spare parts. Failure to comply with the above may undermine the safety of the appliance.
- For repairs/replacements under guarantee contact an Authorised Dealer.

334.900.395



**Beghelli**

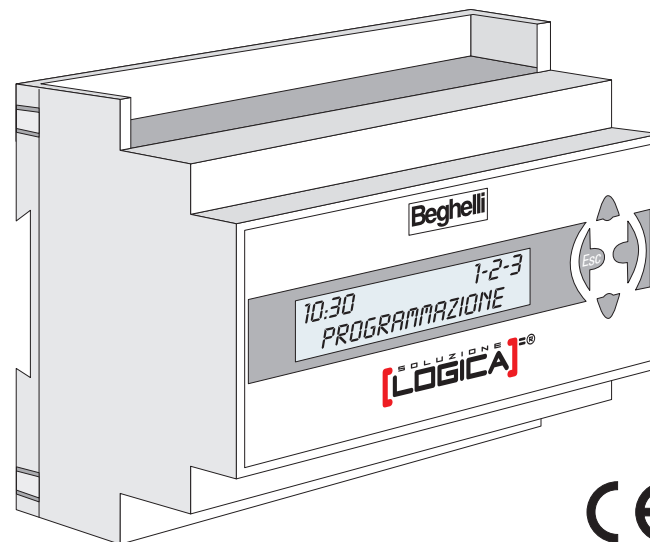
[www.beghelli.com](http://www.beghelli.com)

BEGHELLI S.p.A. - Via Mozzeghine 13, 15 - 40050 MONTEVEGLIO (BO)  
Tel. 051 9660411 - Fax 051 9660444



# BEGHELLI LOGICA<sup>®</sup> CONTROL UNIT

Control unit for centralised management and control of lighting and emergency lighting appliances



INSTRUCTIONS  
FOR USE AND INSTALLATION

**Beghelli**

## INDEX

• <b>WHAT IS THE BEGHELLI LOGICA CONTROL UNIT</b>	page	3
• <b>APPLIANCE FUNCTION</b>	page	3
<b>Wiring diagram</b>	page	4
<b>Groups and scenes</b>	page	5
<b>Menu</b>	page	5
<b>Password</b>	page	6
<b>Initial menu</b>	page	6
<b>“Activate scene” menu 1</b>	page	6
<b>“Light” menu 2</b>	page	7
<b>“Maintenance” menu 3</b>	page	10
emergency function and management 3-2	page	11
error status 3-3	page	12
test management 3-4	page	13
lamp management 3-5	page	14
group management 3-6	page	16
control unit management 3-7	page	17
configuration management 3-8	page	19
<b>“status MSG” menu 4</b>	page	19
• <b>SPECIFICATIONS</b>	page	20
• <b>WARNINGS / WARRANTIES</b>	page	20

## WHAT IS THE BEGHELLI LOGICA CONTROL UNIT

The Logica control unit has been designed to dialogue with different communication protocols. It enables the simultaneous management of both lighting and emergency lighting appliances. As well as the various functions dedicated to testing and controlling emergency lighting, the Logica control unit can command individual appliances or groups of lamps using the DALI protocol, the international protocol that complies with IEC standard 60929. The control unit also allows the creation of customised "scenes" for controlling the type of lighting according to the varying lighting requirements at different times of the day. It is also possible to adjust the brightness using a dimmer for single appliances or groups, even when fitted with a timer or connected to light sensors, which makes it possible to light rooms or areas in the most similar way to natural sunlight (biodynamic lighting).

The control unit is composed of a keyboard+display for all user operations, four programmable switches for light activation, an RS485 input for remote connection and the DALI-compatible bus input for managing the system.

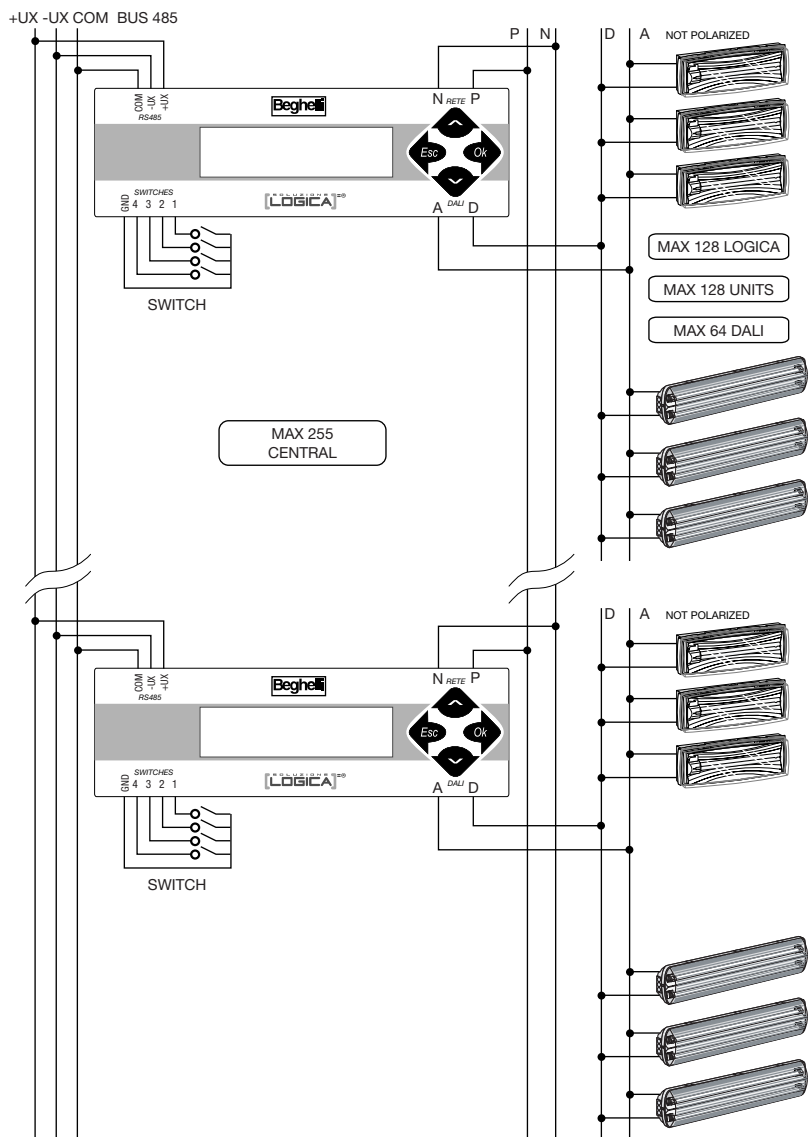
The control unit houses the bus' built-in feeder and can autonomously manage a complete system comprising 128 appliances without requiring further equipment.

If the local switches are used the normally open buttons must be employed.

## APPLIANCE FUNCTION

The control unit manages and controls the status of the programmed appliances, controls routine tests according to the modes set by the user and can perform a vast series of manual operations that can be selected from a series of menus accessible from the keyboard.

## WIRING DIAGRAM



## GROUPS AND SCENES

All the appliances programmed can be associated to 16 groups; each device may pertain to one or more groups or none at all. These groups can enable specific operations on subsets of the system.

A scene is a preset coordinated lighting combination that involves several appliances.





By giving the system the order to go to scene "xx" (from 1 to 16), each lighting appliance goes to a particular internally stored brightness condition. Given that this value is independent for each lighting appliance, preset lighting situations can be created and performed simultaneously, thus combining in a single command many lighting settings for different appliances.

For each scene it is possible to decide that the appliance will switch on, switch off, go to a given brightness percentage, or do nothing at all, ignoring the order and remaining in the current state of brightness.


## MENU

All control unit functions can be accessed from menus: a first level enables a general overview of the system, activates lights or preset lighting scenes; in a second level it is possible to set, programme and modify the system and settings.

The second level is password-protected (the installer will modify it at his discretion in order to protect the settings programmed).

The menus can be scrolled "vertically" using the arrows  and ; by pressing  one selects the item currently displayed; by pressing  one moves up a level. The display back-light is activated when any key is pressed.

To generate a **manual test** proceed as follows:

- select the **"manual test"** menu;
- select the appliance or group of appliances or even the entire system on which the operation is to be performed;
- select the operation to be performed, for instance **"functional test"**;
- press ; the operation will now be performed and the control unit is ready to receive new commands.

## PASSWORD

Given menu sections relate to appliance and/or system parameter setting that must be protected in order to prevent accidental unprogramming of the system.

In order to access a protected menu, the user must enter the password and will then be allowed access for 5 minutes. Should operations last longer than 5 minutes, the User will be required to enter the password again.

## INITIAL MENU

The "Initial menu" enables the User to use previously entered settings, manage lights, check the overall state of the system.

There are four possible options:



- ACTIVE SCENE 1 - makes it possible to select and activate one of the 16 pre-set scenes.
- LIGHTS 2 - makes it possible to activate any appliance and to switch it on, switch it off and dimmer it.
- MAINTENANCE 3 - enables access, protected by a password, to all the setting and programming functions reserved for system fitters.
- STATUS MSG 4 - displays all the control unit status messages currently active.

### "Active scene 1" Menu

This menu enables the activating of the preset lighting scenes.

---

ACTIVE SCENE 1

-  ACTIVE SCENE 01 1-1
-  ACTIVE SCENE 02 1-1

Choose the scene to be activated from 01 to 16 and press  to confirm.

SCENE ACTIVATE





---

Use the "lights menu" to programme the "scenes".

## "Lights 2" Menu

This menu enables switching on, switching off or dimming individual lighting appliances, groups of appliances or the entire system.






When one enters the third level of the menu it is possible to modify brightness directly, in real time, by using the  and  buttons:

- a brief pressing of the  key switches on the appliances at maximum brightness;
- a brief pressing of the  key switches the appliances off;
- a prolonged pressing of the  or  keys causes a slow variation of brightness in the chosen direction;
- by releasing the key the appliances maintain the brightness achieved.

To access the "off" and "on" menus one must enter the password.

---




### LIGHTS 2

-  ALL 2-1
-  ALL 2-1-1
-  SWITCH OFF 2-1-1 password required
-  SET IN SCENE 01 2-1-1-1
-  DEL IN SCENE 01 2-1-1-2

choose scene from 01 to 16 and press  to confirm.

SCENE STORED

SCENE DELETED

-  SWITCH ON MAX 2-1-1 password required
-  SET IN SCENE 01 2-1-1-1
-  DEL IN SCENE 01 2-1-1-2

choose scene from 01 to 16 with  or  and press  to confirm.

SCENE STORED PRESSED  or 

DIMMER --% 2-1-1

-  SET IN SCENE 01 2-1-1-1
-  DEL IN SCENE 01 2-1-1-2

choose scene from 01 to 16 with  or  and press  to confirm.

SCENE STORED

SCENE DELETED

↵ LOGICA 2-2  
 ↵ LOG ---- 2-2-1  
 choose the lamp with ⏏ or ⏏ and press ↵ to confirm.  
 ⏏ SWITCH OFF 2-2-1  
 ↵ SET IN SCENE 01 2-2-1-1  
 ⏏ DEL IN SCENE 01 2-2-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 SCENE STORED  
 SCENE DELETED  
 ⏏ SWITCH ON MAX 2-2-1  
 ↵ SET IN SCENE 01 2-2-1-1  
 ⏏ DEL IN SCENE 01 2-2-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 SCENE STORED  
 SCENE DELETED

pressed ⏏ or ⏏  
 DIMMER --% 2-2-1  
 ↵ SET IN SCENE 01 2-2-1-1  
 ⏏ DEL IN SCENE 01 2-2-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 SCENE STORED  
 SCENE DELETED

↵ BALLAST -- 2-3  
 ↵ BALLAST -- 2-3-1  
 choose the lamp with ⏏ or ⏏ and press ↵ to confirm.  
 ⏏ SWITCH OFF 2-3-1  
 ↵ SET IN SCENE 01 2-3-1-1  
 ⏏ DEL IN SCENE 01 2-3-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.

SCENE STORED  
 SCENE DELETED  
 ⏏ SWITCH ON MAX 2-3-1  
 ↵ SET IN SCENE 01 2-3-1-1  
 ⏏ DEL IN SCENE 01 2-3-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 SCENE STORED  
 SCENE DELETED  
 pressed ⏏ o ⏏  
 DIMMER --% 2-3-1  
 ↵ SET IN SCENE 01 2-3-1-1  
 ⏏ DEL IN SCENE 01 2-3-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 SCENE STORED  
 SCENE DELETED

↵ GROUP 01 2-4  
 ↵ GROUP 01 2-4-1  
 Choose the group from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 ⏏ SWITCH OFF 2-4-1  
 ↵ SET IN SCENE 01 2-4-1-1  
 ⏏ DEL IN SCENE 01 2-4-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.  
 SCENE STORED  
 SCENE DELETED

⏏ SWITCH ON MAX 2-4-1  
 ↵ SET IN SCENE 01 2-4-1-1  
 ⏏ DEL IN SCENE 01 2-4-1-2  
 choose scene from 01 to 16 with ⏏ or ⏏ and press ↵ to confirm.

SCENE STORED  
SCENE DELETED

pressed or

DIMMER --% 2-4-1

SET IN SCENE 01 2-4-1-1

DEL IN SCENE 01 2-4-1-2

choose scene from 01 to 16 with or and press to confirm.

SCENE STORED  
SCENE DELETED

### "Maintenance 3" menu

All "Maintenance" menus are password-protected.

In the "maintenance menu - manual test 3-1" it is possible to perform and interrupt **manual tests** on individual appliances, groups or the entire system. One can give different test commands on different appliances, without waiting for the first to finish before starting the subsequent ones; the lamp that receives a **test start** autonomously proceeds for the necessary time, without requiring the control unit, thus giving the opportunity to control other tests on other lamps.

MAINTENANCE 3

MANUAL TEST 3-1

ALL 3-1-1

STOP TEST 3-1-1-1

FUNCTIONAL 3-1-1-2

ALWAYS SWITCH ON 3-1-1-3

00h 00min 00sec 3-1-1-4

choose the time with or and press to confirm.

COMMAND EXECUTED

LOGICA ---- 3-1-2

STOP TEST 3-1-2-1

FUNCTIONAL 3-1-2-2

ALWAYS SWITCH ON 3-1-2-3

00h 00min 00sec 3-1-2-4

choose the time with or and press to confirm.

COMMAND EXECUTED

GROUP 01 3-1-3

STOP TEST 3-1-3-1

FUNCTIONAL 3-1-3-2

ALWAYS SWITCH ON 3-1-3-3

00h 00min 00sec 3-1-3-4

choose the time with or and press to confirm.

COMMAND EXECUTED

The **unconditioned on** function entails the switching on of the **emergency lamps** powered by battery even in the presence of mains power, without pre-set duration, in which the duration of the battery is not under examination; it is interrupted when the battery is completely run down or by sending a "**stop test**" command. The **autonomy test** is associated to the duration that it must have. This duration is at the User's discretion and can be selected by scrolling the menu downwards. This **manual test** does not in any way modify the timing and the durations set for the **automatic tests**.

In the "**Maintenance menu - Emergency (Management) 3-2**" it is possible to inhibit or enable the **emergency** condition for individual **LOGIC** appliances, groups or the entire system.

It is not possible to permanently inhibit the emergency function or to programme inhibition for the next blackout: each appliance can be inhibited or enabled only if already in blackout conditions, otherwise the command will be rejected.

MAINTENANCE 3

EMERGENCY 3-2

ALL 3-2-1

EMERG. ENABLED 3-2-1-1

EMERG. UNENABLED 3-2-1-2

SWITCH OFF 3-2-1-3

COMMAND EXECUTED

```

Ok LOGICA ---- 3-2-2
  Ok EMERG. ENABLED 3-2-2-1
  EMERG. UNENABLED 3-2-2-2
  SWITCH OFF 3-2-2-3
  Ok COMMAND EXECUTED

Ok GROUP 01 3-2-3
  Ok EMERG. ENABLED 3-2-3-1
  EMERG. UNENABLED 3-2-3-2
  SWITCH OFF 3-2-3-3
  Ok COMMAND EXECUTED

```

Whereas the **enable/disable functions** are reversible, the **off function** is irreversible, unless the mains power comes back on: it is useful to maintain the charge of the light accumulators and, if referred to the entire system, it is used to disable it in the event of particularly lengthy maintenance operations. When the operations have been completed, the control unit switches off and in order to change status again the mains supply must come back on.

In the "**Maintenance menu - Error status 3-3**" it is possible to see whether there are error conditions present on the **Logica** appliances, obtain information about the error conditions and any components that require replacing, and to cancel any error condition indicated.

If a single lamp is selected, only the lights that effectively contain errors in the memory are proposed.

```

MAINTENANCE 3
Ok ERROR STATUS 3-3
  Ok ALL 3-3-3
    Ok DELETE ERRORS 3-3-3-1
    Ok COMMAND EXECUTED

```

For each appliance, only the errors currently in the memory will appear, as well as the possibility to cancel them.

In the event of the selection of **groups of appliances** or the **entire system**, the possibility of cancelling errors only is given without further details.

In order to display the details concerning certain errors press ; you will receive further information on the type of battery or tube, on the minutes of autonomy not completed in the last test.

In the "**Maintenance menu - Management Test 3-4**" it is possible to set the timings and the frequency of the **automatic tests** of the emergency part of the system: it is possible to select when to perform the next **functional/autonomy test** and every how many days to perform the subsequent ones; furthermore it is possible to break the system down into odd and even lights in order to make them perform **autonomy tests** seven days apart. The tests cannot be inhibited.

```

MAINTENANCE 3
Ok TEST MANAGEMENT 3-4
  Ok NEXT FUNCTIONAL TEST 3-4-1
  Ok --- DAYS 3-4-1-1
choose with  and  then press  to confirm.
  Ok XXX DAYS 3-4-1-1
  -- HOURS 3-4-1-1
choose with  and  then press  to confirm.
  Ok XXX DAYS XX HOURS 3-4-1-1
  -- MINUTES 3-4-1-1
choose with  and  then press  to confirm.
  Ok NEXT AUT. TEST 3-4-2
  Ok --- DAYS 3-4-2-1
choose with  and  then press  to confirm.
  Ok -- HOURS 3-4-2-1
choose with  and  then press  to confirm.
  Ok -- MINUTES 3-4-2-1
choose with  and  then press  to confirm.
  Ok FUNC.TEST PERIOD 3-4-3

```

Ok --- DAYS 3-4-3-1  
 choose with and then press to confirm.

Ok -- HOURS 3-4-3-1  
 choose with and then press to confirm.

Ok -- MINUTES 3-4-3-1  
 choose with and then press to confirm.

Ok AUT.TEST PERIOD 3-4-4

Ok --- DAYS 3-4-4-1  
 choose with and then press to confirm.

Ok EVEN ODD TEST 3-4-5

CONTEMPORARY 3-4-5-1

7 DAYS DEFERRED 3-4-5-2

choose with and then press to confirm.

Ok COMMAND EXECUTED

In the "Maintenance menu - Management Lamps 3-5" it is possible to evaluate the current status of each **Logica** appliance or group and modify the autonomy settings (**1h or 3h**) and the even or odd status.

The information on the appliance relate to the presence of mains supply, the presence of errors, **emergency operation inhibition/enabling**, the **test in progress** or **postponed** condition, the **Software version** and the **programming condition**.

MAINTENANCE 3

Ok FITTING MANAGEM. 3-5

Ok ALL 3-5-1

Display when unprogrammed.

Ok ID SW ---.- 3-5-1-1

Ok NOT PROG/PROG (?) 3-5-1-2

Ok 1H/3H (?) 3-5-1-3

Ok EVEN/ODD (?) 3-5-1-4

Ok ----- 3-5-1-5

Ok EMERG. ENABLED 3-5-1-6

Ok STOP TEST (?) 3-5-1-7

Ok DEL TEST SUSP. (?) 3-5-1-8

Ok DEL ERRORS (?) 3-5-1-9

Ok SELF DIMMER 3-5-1-10

Ok DIMMER +/- 3-5-1-11

Ok LOGICA 3-5-2

Display when programmed.

Ok ID SW xxx.x 3-5-2-1

Ok PROGRAMMED 3-5-2-2

Ok AUTONOMY 3H 3-5-2-3

Ok EVEN FITTING 3-5-2-4

Ok MAIN ON 3-5-2-5

Ok EMERG. ENABLED 3-5-2-6

Ok NO TEST ON 3-5-2-7

Ok NO TEST SUSPEN 3-5-2-8

Ok NONE ERRORS 3-5-2-9

Ok GROUP 01 3-5-3

choose with and then press to confirm.

Ok ID SW ---.- 3-5-3-1

Display when programmed.

Ok NOT PROG/PROG (?) 3-5-3-2

Ok 1H/3H (?) 3-5-3-3

Ok EVEN/ODD (?) 3-5-3-4

Ok ----- 3-5-3-5

Ok EMERG. ENABLED 3-5-3-6





```

Ok STOP TEST (P)          3-5-3-7
Ok DEL TEST SUSP. (P)    3-5-3-8
Ok DEL ERRORS (P)       3-5-3-9
Ok SELF DIMMER          3-5-3-10
Ok DIMMER +/-           3-5-3-11



```



In the "Maintenance menu - Management groups 3-6" it is possible to assign each appliance or switch (local) to one or more groups or to none at all, in a totally free and unrestrictive way. There are 16 groups available, there is no obligation to start from the lowest numbers.

At the last level of this menu 16 figures will be displayed (0 or 1): by going towards the right you can select the "x" group (numbered from 1 to 16 from left to right) and with the keys  and  you can pass from the figure "0" to "1" and vice versa. The figure "1" identifies the belonging to the selected group.

An appliance can therefore also have all "1" (belongs to all groups), just some or none, so as to be completely independent from the other appliances. The local switches (four) are managed in the same way: they are assigned to one or more groups; when a button is pressed the action (on/off/dimmer) addresses all the lamps that belong to the groups that the pressed button belongs to. Subsequent commands activate the on/off functions; pressing varies the brightness level. This management concerns the entire **lighting** and **emergency** lighting system, and therefore both the **Logica** and **Dali** appliances.



```





MAINTENANCE 3
Ok GROUP MANAGEMENT 3-6
Ok ALL          3-6-1
Ok 1001000100111011 3-6-1-1
choose 1 with the  key and 0 with the  key.





Ok LOGICA ---- 3-6-2
Ok 1001000100111011 3-6-2-1
choose 1 with the  key and 0 with the  key.

```

```

Ok DALI --          3-6-3
Ok 1001000100111011 3-6-3-1
choose 1 with the  key and 0 with the  key.

Ok SWITCH 1        3-6-4
choose 1÷4 with the keys  and .
Ok 1111111111111111 3-6-4-1
choose 1 with the  key and 0 with the  key.

Ok GROUP 01        3-6-5
choose 1÷16 with the keys  and .
Ok 1111111111111111 3-6-5-1
choose 1 with the  key and 0 with the  key.

```

In the "Maintenance menu - Control unit management 3-7" it is possible to set the current **Day/Time**, modify the **maintenance password**, the **remote address of the control unit** (in the case of multiple systems), order printouts (in the case of local printers) and perform macrocommands.

Some functions of this menu may not be displayed as they depend on the type of system installed.

```

MAINTENANCE 3
Ok C.U MANAGEMENT 3-7
Ok SYSTEM TYPE    3-7-1
Ok GENERIC*       3-7-1-1
*default setting
Ok SCHOOL         3-7-1-2
Ok HOSPITAL       3-7-1-3
Ok CINEMA         3-7-1-4
Ok OFFICE         3-7-1-5
Ok SPORTS HALL    3-7-1-6

```

→ CHANGE DATE - HOUR 3-7-2

→ MON 00:00 3-7-2-1

choose with and then press to confirm.

→ CHANGE PASSWORD 3-7-3

→ OLD PASSWORD ----

→ NEW PASSWORD ----

choose numbers with and keys then press to confirm.

→ CHANGE ADDRESS 3-7-4

→ ADDRESS 000 3-7-4-1

choose numbers with and keys then press to confirm.

→ LOCAL PRINTER 3-7-5

→ NOT PRESENT/PRESENT 3-7-5-1

→ PRINT 3-7-6

→ NO PRINT\* 3-7-6-1

\*default setting

→ CONFIGURATION 3-7-6-2

→ PROGRAMMATION 3-7-6-3

→ ERRORS 3-7-6-4

→ EVENTS 3-7-6-5

→ CONFIG. SWITCH 3-7-7

→ TIMER SENSOR 3-7-8

In the "Maintenance Menu - Configuration 3-8" it is possible to configure the system, i.e. make the control unit search for all the appliances present: only **DALI** appliances or only **LOGICA** appliances.

MAINTENANCE 3

→ CONFIGURATION 3-8

→ NEW 3-8-1

→ NEW DALI 3-8-2

→ NEW LOGICA 3-8-3

Configuration does not change the settings that each appliance had previously, it merely acquires its address and current status.

### "Status MSG 4" menu

STATUS MSG 4

→ XXX LOGICA LAMP 4-1

→ XX DALI LAMP 4-2

→ TOT: XXX FITTING 4-3

→ XX ERR. LOGICA 4-4

→ XX ERR.DALI 4-5

→ TOT:XXX ERRORS 4-6

→ ID SW xxx.x 4-7