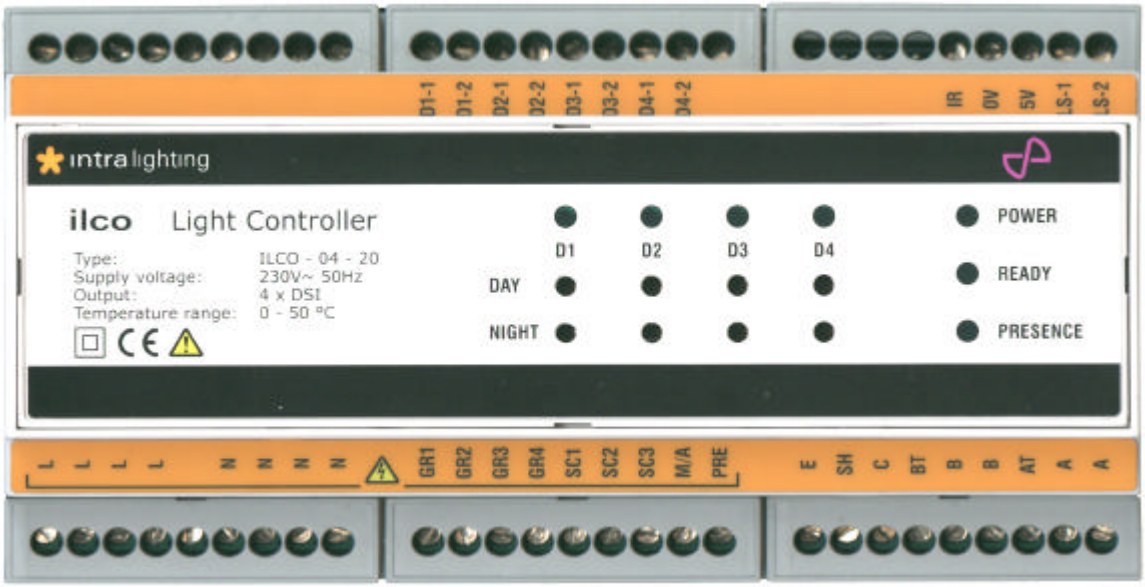
ilco Light Controller v2.3

⚠ WARNING:

The apparatus should not be exposed to dripping or splashing with liquids.

Terminals marked with " ⚠ " are hazardous live terminals. External wiring connected to those terminals requires installation by an instructed person.

The all pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.



Digital light controller ILCO controls with daylight linking 4 DSI lighting groups (max 100 luminaries per group).
Programming of the daylight linking is simple and possible by push to make switches, by IR remote controller or remotely by PC/PLC over A-bus network.

Functions

Manual control
ON/OFF – switching and dimming is performed with one standard, momentary action, nonlocking, push to make switch per group (terminals GR1, GR2, GR3 and GR4).
Short press switch the light on and off.
Press longer than 0.7 seconds dimms the light. Every new press longer than 0.7 seconds alternates UP and DOWN dimming.

Automatic daylight based control
Toggle switching between automatic daylight based control and manual control is performed with one standard, momentary action, nonlocking, push to make switch (terminal Manu/Auto).
In "Auto" mode up to four rows of luminaries are controlled on the basis of available daylight.
Light groups can be switched off individually or together with presence sensor or IR remote controller.

Scenes
Up to 3 scenes can be programmed and recalled with push to make switches (terminals SC1, SC2 and SC3).
Memorizing scenes is done with more then 3.5 seconds long press after the desired levels setting (all in manual mode).
Short press recalles the scene.

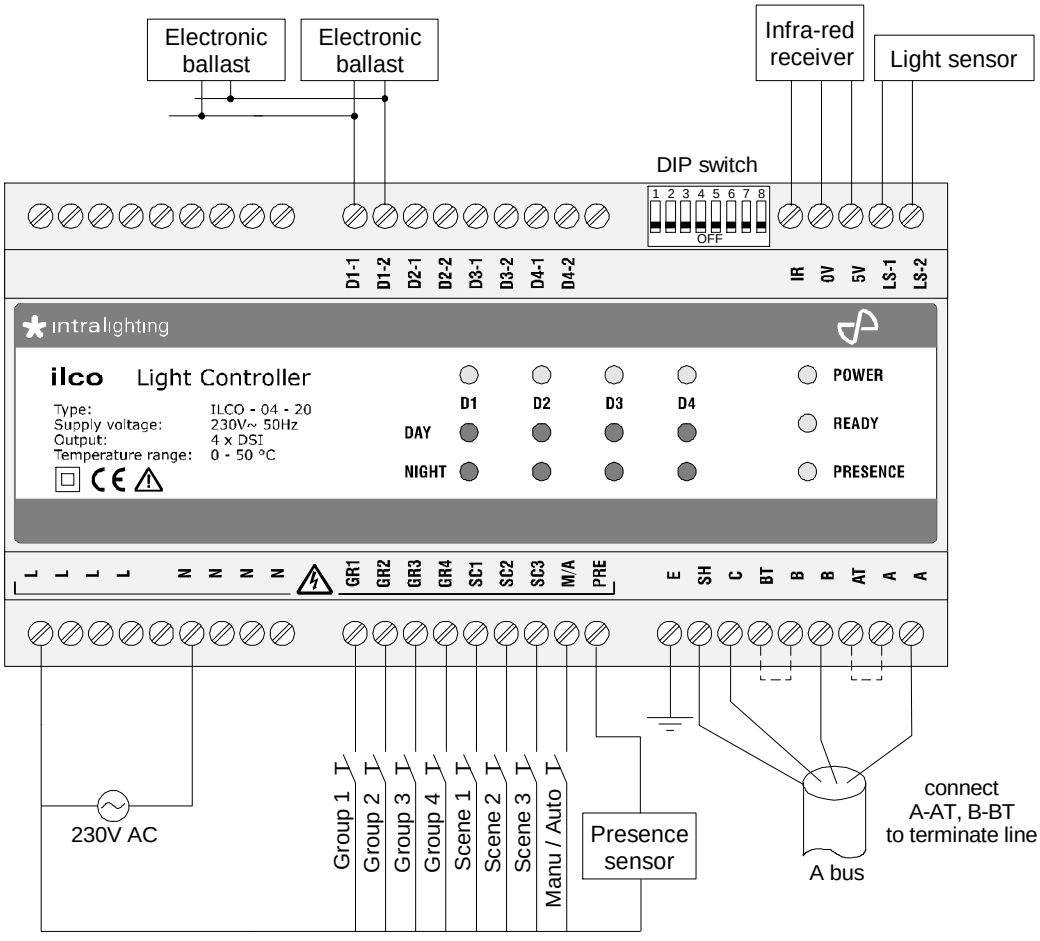
Presence detection
Presence sensor signal absence will switch off all groups after time-out of 5 minutes
Presence detection function is activated by DIP switch 7 ON.

Remote controller
All groups are switched together on/off with **On/Off** buton and dimmed with **Dim+** and **Dim-**.
Prior press on one of **Group** buttons will limit actions to sellected group.

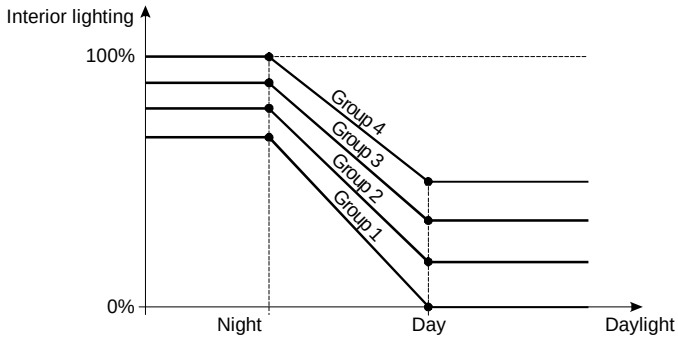
Scenes are activated in rotating order with **Scene+** or **Scene-**.
Up to 3 scenes can be memorized with pressing **Function** and one of **Group** keys (**Group1** for scene1 and so on) after the desired levels setting.

Toggle switching beetween automatic daylight based control and manual control is performed with **Auto/Manual** key.

Circuit diagram

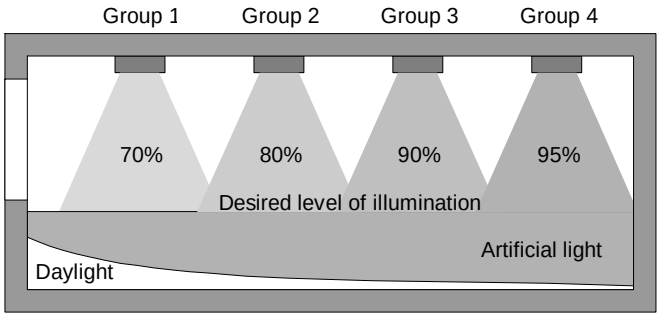


Programming instructions

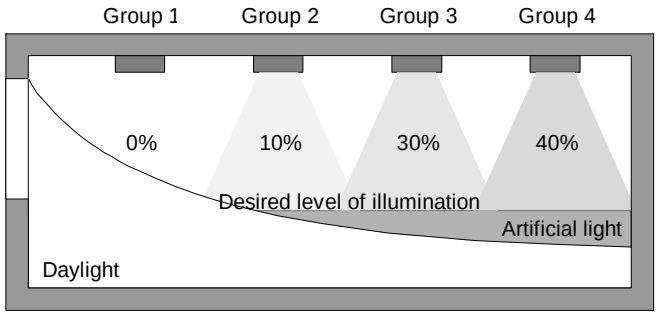


Separated control characteristics can be entered for each group. The path of the characteristics is determined by programming day and night system points with DAY and NIGHT keys.

Programming at twilight (system point "night")
Set the illuminance required for each group (1-4) with pushbuttons or remote controller.
Program (memorize) system points "night" by pressing the corresponding NIGHT keys.
Optimum programming time is when desired light level requires 100% illuminance from group fourthest from the window.

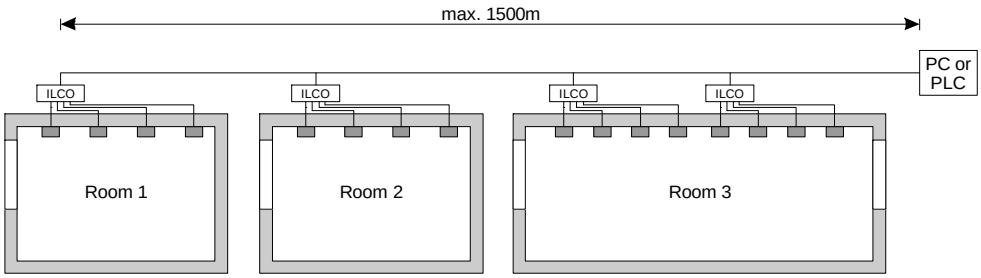


Programming by day (point "day")
Set the illuminance required for each group (1-4) with pushbuttons or remote controller.
Program (memorize) system points "day" by pressing corresponding DAY keys.
Optimum programming time is when the group nearest the window can just be switched off.

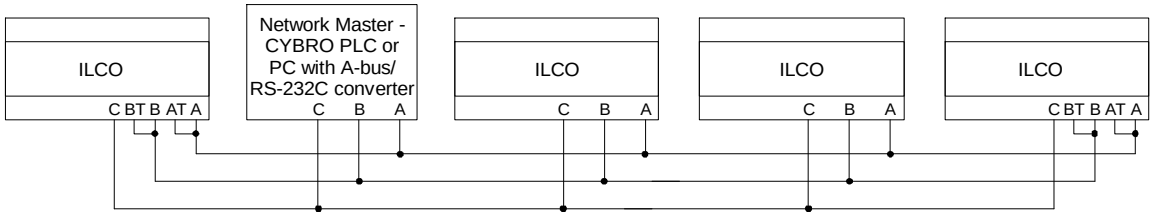


Networking

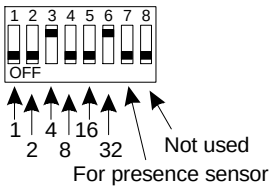
Up to 32 controllers can be connected into an A-Bus network and supervised by the PC or PLC.



Network setup
Connect A, B and C-s. The first and the last controller in line must have terminating jumpers (A to AT and B to BT).



Controller network address is defined by DIP switches added to base 2000.
For example: 4+32+2000 = 2036.



Technical specifications

POWER SUPPLY:

Power supply voltage ..... 230V~ 50 Hz
Power consumption 5VA

DIGITAL INPUTS:

Switches for manual light control ..... 4 ..... 230V~ 50 Hz
Switches for memorizing and activating scenes ..... 3 ..... 230V~ 50 Hz
Automatic/manual toggle switch ..... 1 ..... 230V~ 50 Hz
Presence sensor ..... 1 ..... 230V~ 50 Hz
IR decoder ..... 1 ..... 5V

ANALOG INPUTS:

Ambient light sensor ..... 1 ..... 4-20 mA

DIGITAL OUTPUTS:

DSI outputs ..... 4 ..... max 100 LME luminaries per output

NETWORKING:

A-bus port 1

OTHER:

Ambient temperature range ..... 0 - 50 °C
Galvanic isolation ..... digital inputs / microcontroller / DSI
LEDS ..... power, status, DSI outputs, presence
DSI control line ..... NMY 2x1.5mm^2 (H05VV-U 2x1.5), max. 250m per output
Switches, sensors and decoder lines ..... NMY 2x1.5mm^2, max. 250m
Terminals ..... 1.5 - 2.5mm^2
Type of protection ..... IP 20
Housing material ..... plastic
Mounting ..... on 35mm rail as per EN 50022
Dimensions 90x160x58mm
Weight 0.5kg