



Ver. 1.12\_E | User Guide

# IPC Series Control Manual



Model : IPC-6Z



## IPC

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The IPC provides solutions where dimming can be controlled wirelessly and has four types of models including IPC-1Z, IPC-2Z, IPC-3Z, and IPC-6Z.



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## Overview of the IPC

### IPC (Intelligent Power Control)

- The IPC allows lighting brightness to be controlled through wireless and wired communications by using the rotary switch on the front side of the product.
- One zone is assigned per rotary switch on the front side of the product, and a total of six zone scans be configured in the case of the IPC-6Z model
- One unit of the IPC can control lighting by 200 units in total irrespective of the quantity of the rotary switches on the front side of the product and allows the configuration of as many zones as the quantity of the rotary switches.

*ex.1) In the case of IPC-1Z, a total of 200 units of lighting can be controlled, allowing the configuration of one zone.*

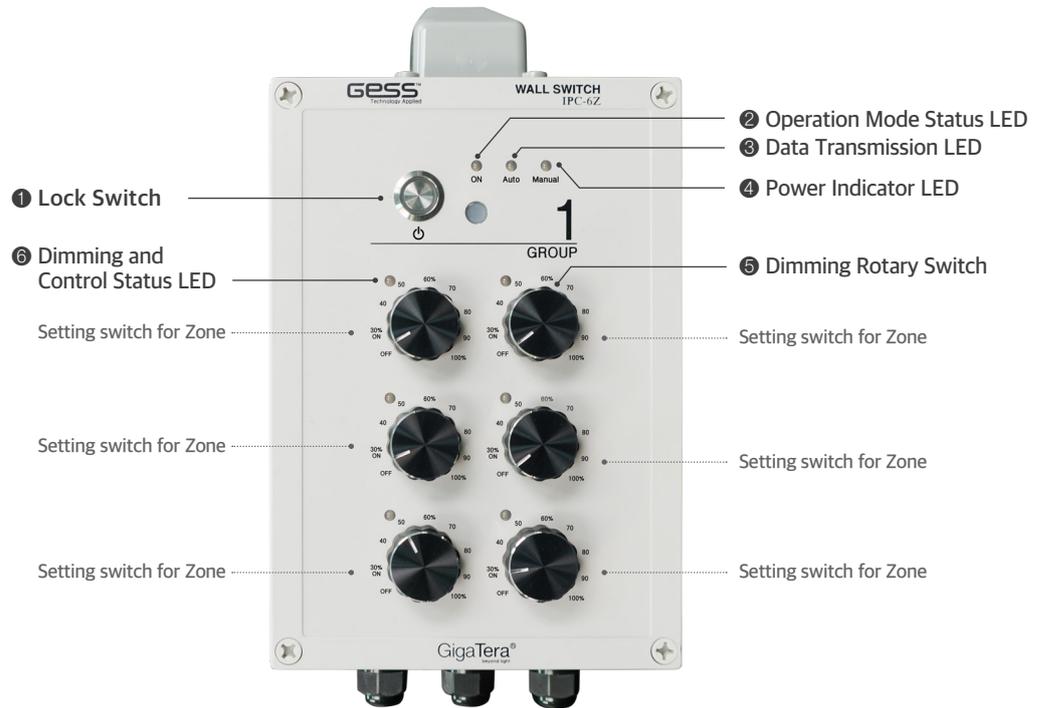
*ex.2) In the case of IPC-6Z, a total of 200 units of lighting can be controlled, allowing the configuration of six zones.*

- For the zone setting, it can be set per lighting by using the POC program and the POC USB Dongle. (Reference : POC Program Manual)
- Operation Temperature : -20°C ~ 60°C ( -4°F ~ 140°F), IP Rate : IP65

### Status LED Table

LED	Lock switch	Operation mode status display	Data transmission / receive display	Power indicator display	Dimming and control status display
Red	Dimming switch Lock	Wireless mode	-	-	Zone controlled externally (Blink)
Green	-	Wired mode	Blink	On	Relevant zone on
OFF	Dimming switch Unlock	-	-	OFF	Relevant zone off

\* n/a : not / applicable



\*The above image shows the IPC-6Z product.

### ① Lock Switch

The lock switch is used for the execution of the Lock/Unlock of the dimming switch to prevent operation by a user's unintended mistake of the IPC. When pushed for a short period (within 2 s), the lock is released with the LED for the lock switch turned off. Meanwhile, when pushed for a long period (more than 2 s), the lock is locked with the LED for the lock switch displayed in red.

### ② Operation Mode Status LED

When the IPC operates in the wireless mode, it is displayed in red. Meanwhile, when it operates in the wired mode, it is displayed in green.

### ③ Data Transmission LED

When the IPC transmits and receives data, it blinks in green.

### ④ Power Indicator LED

When the IPC controller is powered up, it is displayed in green.

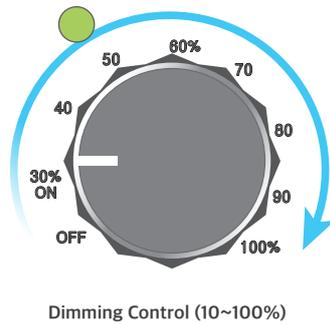
### ⑤ Dimming Rotary Switch

It is used upon controlling the lighting brightness and performing ON/OFF for the zone connected to the relevant switch. The zone to be controlled by the switch can be assigned through the POC program as desired by a user.

### ⑥ Dimming and Control Status LED

The lighting of the zone connected to the relevant switch is displayed in green when it is in the ON state; turned off when it is in the OFF state; and blinks in red when controlled by the IPC-S, WOS, etc., rather than the IPC.

## Turning the Lighting On / Off per Zone

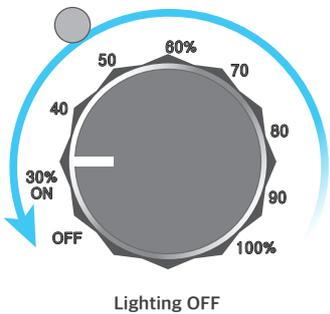


### Turning the lighting on per zone

When the LED of the dimming rotary switch is turned off, the lighting of the relevant zone is in the OFF state. Meanwhile, it is controlled by the IPC-S or WOS when it blinks in red.

At this time, the dimming and control status LED is displayed in green if the dimming rotary switch is rotated to the right-side direction and the lighting of the relevant zone is the ON state.

When the dimming rotary switch is turned to the right-side direction to the end for about 3 s from the time when the dimming and control status LED is changed to green, the lighting gradually becomes brighter, with a brightness of 10%-100%.



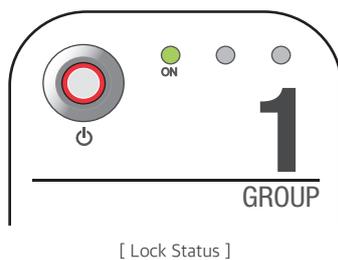
### Turning the lighting off per zone

Turning the lighting off per zone: When the dimming rotary switch is turned to the left-side direction to the end when the dimming and control status LED is displayed in green, the lighting of the relevant zone is in the OFF state.

However, when the AC input power supply for the relevant zone is reset while the lighting is turned off, the lighting is in the ON state at the finally set brightness value.

## Setting the Lock / Unlock for the Dimming Rotary Switch

The IPC supports Lock / Unlock to prevent cases where the dimming rotary switch is operated unintentionally due to a user's mistake.



### Setting the Lock

In the dimming rotary switch, Lock is locked in the following two cases:

1. When the dimming rotary switch is not in use for more than 5 min
2. When the lock switch is pushed for a long period (more than 2 sec)

When the lock is locked for the dimming rotary switch, the lock switch LED is displayed in red, informing that it is currently in the locked state.



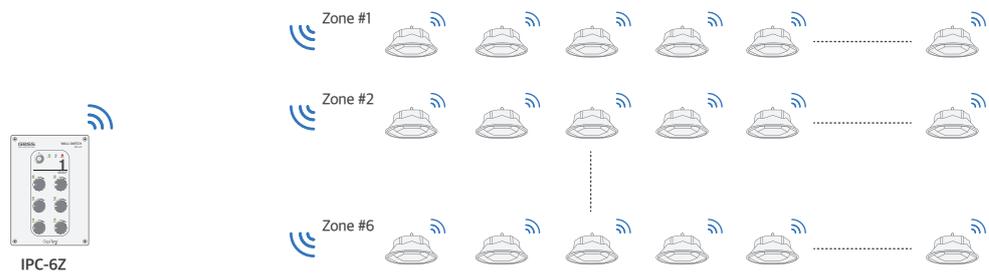
### Setting the Unlock

If the lock switch is pushed once for a short period (within 2 s) when the dimming rotary switch is locked by Lock, the lock is unlocked. When the dimming rotary switch has moved while the red light of the lock switch is turned off and it is in the locked state, the lighting is controlled in the moved state.

## Reference Items upon the Operation of the IPC

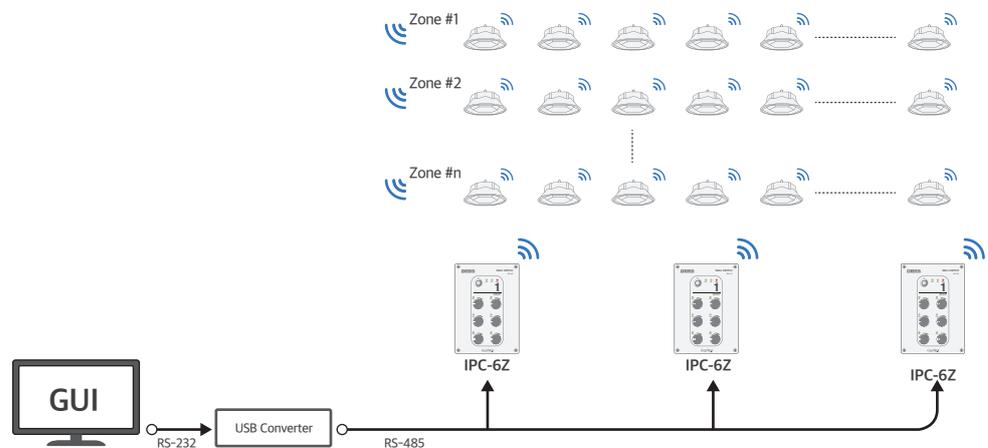
1. For the IPC, a constant power supply is recommended.
2. When multiple lightings are controlled by the dimming rotary switch, a maximum of 20 s of delay can occur, depending on the distance between the lightings and the quantity of the installation.
3. The communication distance between the IPC and the lighting as well as the communication distance between lightings are specified to be less than a maximum of 100 m (at LOS). If there is a lighting that cannot be controlled beyond the communication range after product installation, then communication problems can be solved through the installation of a repeater.

## Basic Schematic Diagram for the System



- The above contents show a schematic diagram that allows connection when the IPC-6Z controller is used.
- Basically, one unit of IPC can control 200 units of lighting, and the IPC-6Z model allows the setting of six zones.
- For the control of lighting through the IPC, wireless nodes capable of transmitting/receiving control signals should be loaded in all lightings.
- All control signals are transmitted through a wireless method, while an AC power supply should always be connected to the controller and the lighting.
- The control signals of IPC-6Z are transmitted to the No. 1 lighting of each zone, and control signals are transmitted to the No. 2 lighting for the No. 1 lighting and to the No. 3 lighting for the No. 2 lighting.
- If the No. 1 lighting of Zone 6 is outside the communication range of the IPC-6Z controller, the IPC or repeater should additionally be installed.
- For such configuration as above, the channels and zones of the controller and the lighting should be set beforehand.
- To set the channels and zones of the controller and the lighting, GeSS-POC software should be used.

## Expanded Schematic Diagram for the System



- When the computer with an installed graphical user interface (GUI) software is connected to the IPC through RS-485 communication, the central control is enabled.
- To convert RS-232 signals (short distance) to RS-485 signals (long distance), a USB converter unit should always be installed.
- Several units of IPCs can be configured, and the channels of each controller may be installed identically or differently depending on the setting purpose of a zone.



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