



SIEMENS

# Optimal control for superior lighting performance

Siemens Gamma provides lighting controls that maximize efficiency and energy savings.

Answers for infrastructure.



# Integrated lighting controls that improve budgets and occupant comfort

With Siemens Gamma, you can now provide lighting levels that are precisely what your building's occupants need – nothing more, nothing less. Gamma is a new, integrated lighting control system that can achieve significant energy savings. Gamma's distributed control architecture lets you easily manage all aspects of your facility's lighting without worrying about single points of failure.

Designed for buildings of any size, Gamma's seamless integration with Siemens industry-leading building automation systems allow you to manage your entire facility from a single seat of operation. With Siemens, you have a reliable partner for energy-saving, feature-rich lighting controls.

# Flexible ways to save

## Designed to reduce costs

ENERGY STAR® reports that lighting alone accounts for about 35% of a commercial building's electricity use, making it one of the most significant costs for your facility. That's why Gamma is designed to enhance lighting performance and occupant comfort while reducing energy expenses.

Gamma lets you choose the right application to provide the right lighting for any space or user need. Studies supported by the U.S. Department of Energy reveal lighting controls can deliver 20% to 60% energy savings compared to stand-alone lighting systems. Through Gamma's range of applications, your facility can take advantage of this level of savings.

## Gamma supports energy-saving applications.

**Daylight harvesting** – Responding to the available natural light in a room, brightness sensors reduce artificial lighting in a space. This strategy retains the quality of the visual environment while reducing your energy costs. Maximizing your use of sunlight helps you gain immediate savings, and it helps meet local and national standards such as ASHRAE 90.1, LEED® and California Title 24.

**Occupancy control** – In order to maximize energy savings when the space is not occupied, Gamma occupancy controls can dim, reduce or increase lighting, as well as adjust window shading and change temperature setpoints via your Siemens building automation system (BAS).

**Task tuning** – Preset the default light levels of a particular space based on the specific tasks associated with that space. You can control lighting levels of individual fixtures or areas throughout your facility and provide just the right amount of light for the activities in each area. Giving occupants the ability to adjust the lighting to fit their own needs allows further comfort and energy savings.

**Scheduling** – Automate dimming and/or switching preferences and space use/occupancy through your Siemens BAS. You can pre-program lighting activity in various rooms all from your Siemens workstation.

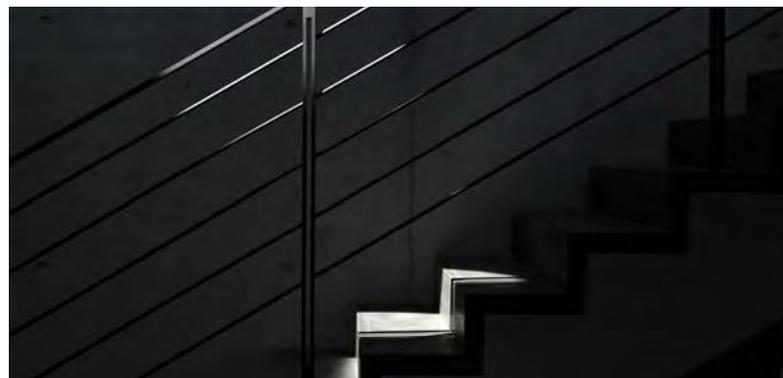
**Blind/Shade control** – Control blinds to meet the illumination and comfort needs of occupants, either manually or automatically. The Gamma Weather Station can calculate the position of the sun to control the blinds, so the glare of direct sunlight is never bothersome. When you can limit the amount of direct sunlight in a room, you also keep the room from getting uncomfortably warm. Savings are realized through lowered dependence on HVAC.

**Ballast-level control** – Control lighting zones and groups as well as individual lights. This level of granular control delivers the greatest savings and flexibility of use. Gamma supports On/Off control, analog dimming control and Digital Addressable Lighting Interface (DALI) control. Through individually addressable lighting, we flexibly meet your needs for functionality and comfort, as well as energy savings.

Gamma supports a range of smart applications that save energy on lighting and improve the visual environment for your facility's occupants.

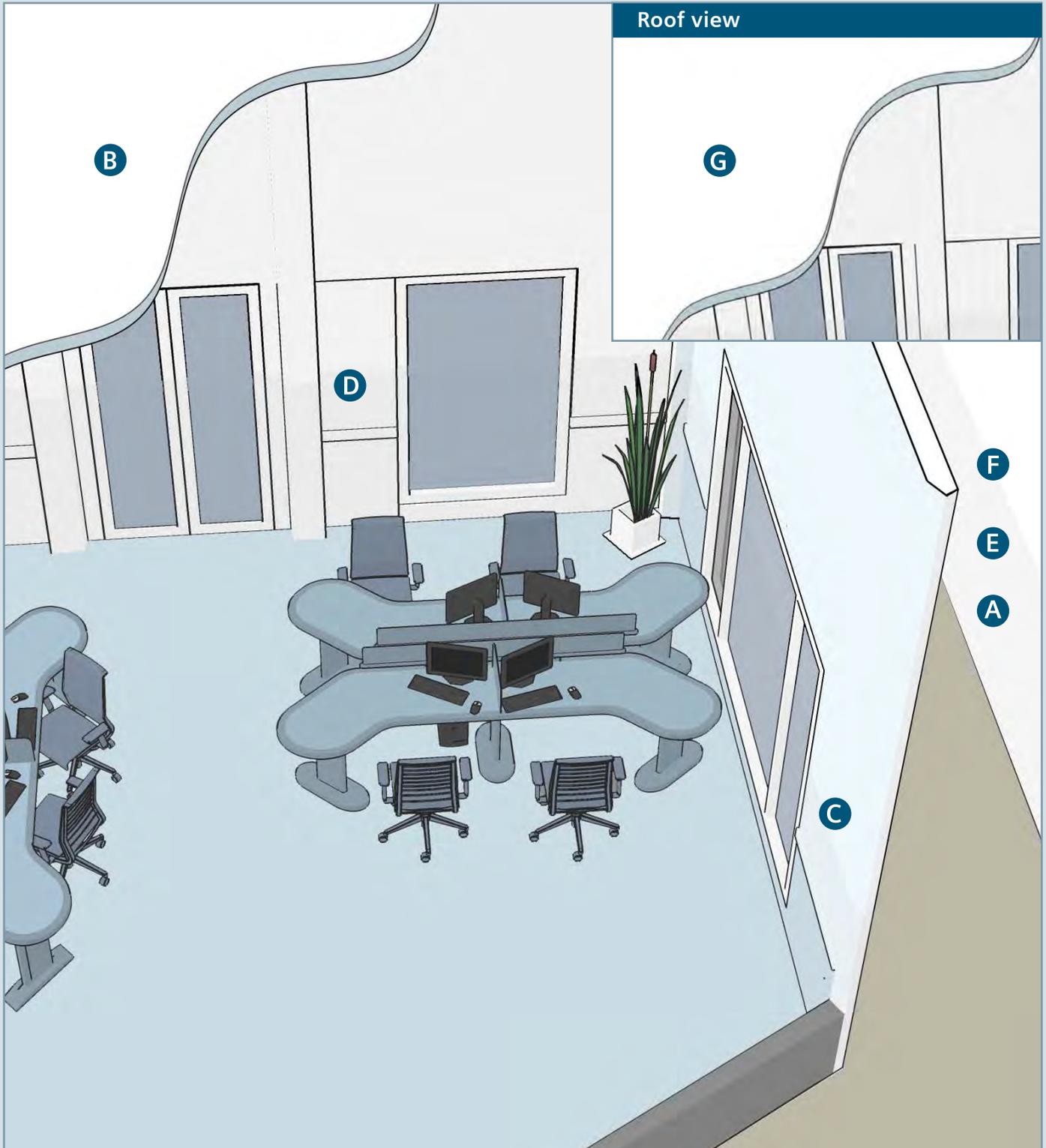


Whether you use an iPhone, iPad or Android device, you can remotely access your Gamma installations and securely monitor, control or troubleshoot your installations from anywhere.



# A family of innovative products

Gamma products provide your facility with the latest in time-, daylight- and presence-dependent lighting control technologies.



**A**

### Touchpanel Interface

- Full-color touchpanel – 5.7" diagonal screen
- Monitor and command any Gamma control point such as lighting, shading, setpoints or values through BAS integration
- Create up to 20 scrollable interface pages using four templates
- Supports alarm monitoring, trend display, date and time display, and password protection
- Customize your own startup screen or up to 100 alternating slideshow images

**B**

### Opticontrol – Combo Presence Detection and Light Level Sensor

- Brightness control sends dimming or On/Off signals to maintain a constant light level and reduces energy usage when "free" lighting from windows is available
- Fully adjustable motion range, field and light sensitivity and brightness setpoints
- Fully configurable on-time, off-time and behavior in different scheduled periods
- Use an optional infrared (IR) remote to control lights and blinds and to access scenes via the Opticontrol built-in IR receiver

**C**

### Gamma Switches

- Available in one-pair, two-pair and four-pair
- Each button is configurable for different functions
- Software configuration – with no hard wiring – gives you flexibility to switch individual devices or groups
- Variants with LED indication and with IR remote control
- Uses any architect's switches through separate switch interfaces

**D**

### Motion Sensing/Occupancy Control

- Detects motion and sends switching commands
- Software configuration – with no hard wiring – gives you flexibility to switch individual devices or groups
- Fully adjustable motion range, field and light sensitivity
- Fully configurable on-time, off-time and behavior in different scheduled periods

**E**

### Relay and Analog Dimming Outputs

- Switches lights or other loads through eight individually controllable 20A relays
- Dims up to 60 analog lighting ballasts with each of eight individually controllable analog outputs
- Supports manual or automatic On/Off, dimming, daylight harvesting and scene control
- Allows for manual overrides and delivers visualization of output status
- With separate DALI controller, control up to 64 DALI ballasts individually or in groups

**F**

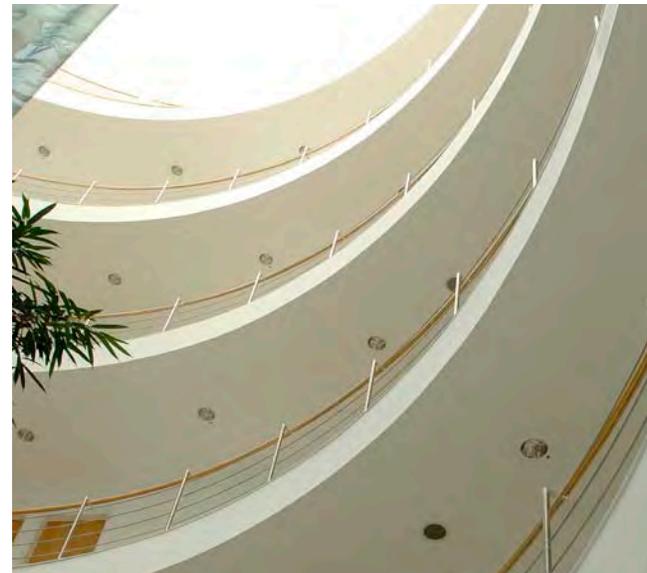
### Blind/Shading Control

- Blind actuator uses outputs specifically designed to detect end positions and control up to four separate shade and blind motors
- Raises and lowers shades, sets positions and tilts louvers
- Works with motorized projection screens
- Utilizes manual control with switches, automatic control as part of defined scenes or automatic control with the Weather Station

**G**

### Weather Station

- Measures solar intensity, calculates the position of the sun and measures wind speed and air temperature
- Uses weather measurements to automatically manage blinds/shading on all sides of your building
- Uses wind speed to protect external blinds by moving them to a defined safe position so they will not be damaged by high winds
- Uses frost detection to separate the slats so they will not freeze together



## Gamma grows with you.

For an updated list of available rebates and state incentives, visit [usa.siemens.com/gamma](http://usa.siemens.com/gamma)

### **Benefit from distributed control.**

Gamma lighting controls can be installed in a traditional centralized panel configuration, but the greatest energy-saving benefits come when Gamma is implemented as a fully distributed system. Gamma controls can be local to each lighting fixture, meaning there's no single point of failure. The highest level of control distribution comes when you select the Gamma DALI interface. From On/Off control, dimming to scheduling, the Gamma DALI interface communicates to individual ballasts or groups of ballasts. It also provides controls for LED fixtures, allowing for diverse lighting controls and greater energy savings. This kind of granular control lets you deliver the right level of lighting to any space for any occupant's needs.

Gamma's components communicate with each other over a low-voltage network. This network can simplify the line voltage circuitry, making it easy and inexpensive to install and to introduce Gamma into any facility. Because the "control wiring" is independent of the "power wiring," you gain the flexibility to install devices where you need them.

Starting as small as a single room or expanding to a full building or multiple buildings as your organization grows, our distributed controls make it easy to add new functionalities as your needs evolve. Gamma can accommodate lighting functionality changes efficiently for new constructions, expanding facilities or retrofitting projects. You can also adjust functionalities and applications easily through software, eliminating any need for costly rewiring.

### **Integrate your controls.**

Gamma delivers single-seat control so you can better regulate your building's lighting. Integrated into your Siemens BAS, it improves how you control, monitor and coordinate lighting with other building systems. Along with HVAC and fire and life safety, Siemens BAS incorporates Gamma using BACnet, the industry standard protocol for interoperability among multiple building systems. You can easily manage lighting levels from the intuitive interface of your Siemens workstation.



Through BAS integration, Gamma not only lets you operate lights precisely as needed, it also lets you better manage energy-reduction practices. Because Gamma can coordinate with other building systems, it simplifies load shedding for demand response needs. Now you can easily reduce power in less critical areas during peak demand times.

#### Gain more control with Gamma.

No matter if you operate a hospital, university or multi-purpose campus, you only need one Gamma lighting control system for your many lighting requirements. The Gamma tools let you easily program lighting groups throughout your facility, so you determine and command the proper level of light for any space.

Using Gamma's IP interface or your Siemens BAS, you can take advantage of smartphone apps. Whether you use an iPhone, iPad or Android device, you can remotely access your Gamma installations and securely monitor, control or troubleshoot your installations from anywhere.

#### The partner you can depend on.

When Gamma is integrated with your Siemens BAS, you can coordinate proper levels of light for any situation, at any time. Integration gives you smarter lighting control and the dynamic energy savings you want.

Siemens is the world's leading provider of safe, secure and energy-efficient solutions for buildings and building infrastructure. From schools to offices to complex campuses, Siemens lighting control expertise extends to a broad range of markets and facilities of all sizes. We have more than 160 years of engineering breakthroughs behind us, so you can trust that we'll be around to support you long into the future.

#### Highlights

- Discover energy savings between 20% and 60%\*.
- Select the right energy-saving applications to fit the needs of each space.
- Helps you comply with local and national standards for lighting such as California Title 24, ASHRAE 90.1 and LEED.
- Gain the most energy savings and flexibility through distributed control.

\*Meta-analysis of 240 savings estimates from 88 papers and case studies funded by the U.S. Department of Energy

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This document contains a general description of available technical options. Any specific solution(s) will be based on a client's particular requirements and will be addressed in the contract for the project.

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#### **Answers for infrastructure.**

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming, and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly

growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

**“We are the preferred partner for energy-efficient, safe, and secure buildings and infrastructure.”**