More efficiency in office buildings – with HVAC, lighting and security

Simply more productive: Higher energy efficiency and more flexibility thanks to Synco HVAC controllers and GAMMA building control
Saving energy and staying flexible in hard everyday working life

Thanks to intelligent energy saving functions, GAMMA building control in connection with Synco™ heating, ventilation and air conditioning controllers lower the energy consumption of office buildings – and thus their operating costs. The individual system components offer ease of use, ensure reliable operation and optimize the room climate in office spaces, conference rooms, lounges and sanitary areas. This provides for a pleasant and productive working atmosphere.

Also, you benefit from high investment protection because Synco HVAC controllers and GAMMA building control are very flexible and can be easily adapted to new room assignments, changed occupancy schedules or building extensions.
Intelligent technology for smart buildings

Well prepared for everything
Modern office buildings need to satisfy a number of requirements: Perfect working conditions, maximum security and highest levels of flexibility – at minimum cost. With Synco and GAMMA, Siemens offers you building technology, enabling you to easily satisfy complex individual requirements in the future too.

Fluctuating room occupancy, floors with flexible room assignments or integration of new media technology – no problem with Synco and GAMMA. Thanks to the internationally recognized KNX communication standard for home and building management, functions can be straightforwardly extended, with no need to run new wires. In addition, electrical, heating, ventilation, air conditioning and media devices of different vendors can communicate with each other, thus allowing new functions to be integrated at a later stage.

Green efficiency for your office building
Cut your operating costs and attain energy class A with leading-edge building technology from Siemens: Synco and GAMMA prevent the waste of energy caused by unnecessary lighting, air conditioning and heat losses. This way, you save energy costs, contribute to environmental protection and give your building a green image by obtaining energy class A.

Intelligent comfort when it comes to room climate and straightforward operation
Be it pleasant room temperatures, good air quality or as much as possible glare-free daylight – with GAMMA and Synco you create an excellent working atmosphere. This improves the building users’ motivation and ability to concentrate, and thus their productivity. Another benefit is ease of operation of all systems – be it on site for each room or centrally for the entire building.

Reliable, future-proof products from a single source
As a leading company in the field of building technology, Siemens offers you a comprehensive and consistent solution – from the production of heat/cooling energy to the distribution of thermal and electrical energy, tailored to the specific needs of your building. Thanks to modular concepts and open communication, this solution can be modified or extended at any time, ensuring that you will be on the safe side in the future as well.

Highlights
- Flexible adaptations to new room usage and changing needs based on KNX
- Energy and cost savings thanks to automated control and energy saving functions
- Environmental protection owing to lower energy consumption
- Motivating, concentration-stimulating working atmosphere thanks to comfortable room climate
- Reliable, extendable products from a single source
Lower energy costs and optimum working conditions

**Up to 20% energy savings thanks to time- and presence-dependent temperature control**

- 24-hour, 7-day or yearly time programs using occupancy schedules as a basis
- Presence-dependent room climate with presence detectors

**20 to 70% energy savings thanks to demand-controlled ventilation**

- Ideal amounts of fresh air at the right temperature level – at any time
- Perfect working conditions

**Up to 30% energy savings thanks to individual room control and automatic exchange of data with the heating/cooling plant**

- Climate can be individually adjusted for every room
- Higher control accuracy owing to eu.bac-certified products
- Window contacts prevent the waste of energy
Up to 45% energy savings thanks to time-, presence- and daylight-dependent lighting control
– Automatic control of lighting
– Optimum light conditions at all times
– Only as much as necessary artificial light guaranteed by constant light control
– Extensive light control through straightforward integration of DALI (Digital Addressable Lighting Interface)

Up to 30% energy savings thanks to time- and daylight-dependent shading control
– Automatic control of shading
– Maximum proportion of glare-free daylight ensured by sun tracking control
– Selectable proportion of sunlight through shadow outline tracking
– Scene control e.g. during beamer presentations

Straightforward management and monitoring of energy efficiency
– Energy indicator reports unfavorable settings via e-mail or HomeControl app
– Easy operation by facility manager or service personnel via the Internet from any location
Matching user interfaces for every type of application: from simple buttons to multifunctional touchpanels and central display of all essential information about the building.

Siemens brings safety and security

Automatic safety and security functions
At night, the building switches automatically to its secure operating state: blinds down, lighting off and the building’s monitoring state is activated. This means that information is provided about open windows, skylights or exterior doors. In the event of strong winds, the blinds are immediately raised and the skylights shut. If there is a fire alarm, the electrical consumers are immediately shut down and the escape route lighting is switched on. In addition, air dampers are shut and fans are deactivated. If smoke occurs, the air dampers are opened and the fans activated to ensure smoke extraction.

Security thanks to remote monitoring
Web-based visualization on a PC or control panel shows all important information about the building, including alarm and operating state messages such as lamp failures or brightness levels of lamps.

The energy indicator monitors defined settings for heating, ventilation and air conditioning, shows limit value violations and transmits the respective signals periodically via e-mail or app, either locally to the facility manager or at night to security personnel in other buildings. This ensures a quick response, prevents or reduces damage and guarantees reliable and efficient operation. And there is no need to install special alarm devices: Every time a lamp is switched or a window or an exterior door opened, an alarm message is triggered in the plant’s monitoring state, which can be forwarded via SMS or e-mail.

Secure lighting
Presence-dependent corridor lighting ensures the right light level at the right time. Outdoor and pathway lighting can be switched depending on brightness, motion or time. Should a power failure occur, safety is guaranteed at any time with emergency lighting.

Highlights
■ Higher security level with no need for extra personnel thanks to automatic security functions and remote monitoring
■ Interventions can be made faster owing to notification of malfunctions, deviations, access, etc., via e-mail, app and SMS
■ Lower risk of accidents thanks to efficient corridor, pathway and escape route lighting
### General

**Energy efficiency, economy and comfort**
- Time- and presence-dependent temperature control
- Individual temperature control for every room
- Demand-controlled ventilation
- Economy mode when window is left open
- Energy indicator and HomeControl app

**Control of lighting:**
- Control via time programs
- Presence-dependent control
- Constant light control

**Control of shading:**
- Sun tracking control
- Shadow outline tracking

### Safety and security

- Secure building operating state during the night
- Indication of open windows, skylights or exterior doors
- Automatic security program in the event of strong winds
- Automatic response in the event of fire alarm (control of fire protection dampers)
- Comprehensive visualization on site or with external on-call service
- Display of operating states and fault status messages
- Monitoring without special alarm system
- Alerting via SMS or e-mail
- Presence-dependent corridor lighting
- Brightness-, motion- and/or time-dependent outdoor and pathway lighting
- Emergency lighting in case of a power failure

### The different areas

#### Office spaces
- Time- and/or presence-dependent temperature control
- Individual room control
- Automatic control of lighting
- Automatic control of shading

#### Conference rooms and zones
- Combined control of building functions and media technology
- Straightforward scene control
- Demand-controlled ventilation
- Individual room control
- Automatic control of lighting
- Automatic control of shading

#### Lounges
- Demand-controlled ventilation
- Presence-dependent control of lighting
- Automatic control of shading

#### Sanitary facilities
- Presence-controlled extract air plant
- Presence-dependent control of lighting

#### Facility management office
- Central operator station with optional remote access
- Straightforward visualization of all relevant areas on the PC, tablet or smartphone
- Alarm messages directly to the office or via SMS
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.”

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.

The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.