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 trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”
Siemens and the KNX Association – two strong partners for your success

KNX – the worldwide standard for home and building control – enables on-demand and cross-discipline control of room temperature and energy management as well as lighting and shading. Installed by qualified building control technicians, the intelligent networking of building automation products offers completely new ways to increase energy efficiency, security and comfort.

The certified training program from Siemens provides you with comprehensive and in-depth knowledge on every aspect of KNX. The Gamma training kit offers you an extremely simple self-instruction option for training in a wide range of functions and applications, as well as for consolidating your knowledge and abilities in the KNX field – leading you step by step to success.

Certified further training
With our wide range of courses and practical trainings on all aspects of KNX, IP and DALI you can gain the extra edge you need to take the lead in the market. For your certified training and future-proof specialization, we offer you a wide choice of courses – from KNX certificate courses like the KNX basic course and the KNX trainer seminar to application-related courses including lighting, control and monitoring with KNX.

Putting theory into practice from the start
Our training courses offer a balanced mix of theory and practice and so contribute to your success in the market. Our high-quality training courses are distinguished by their high level of practical content.

Qualification as a KNX building control technician
After completion of the KNX advanced course and two modules of your choice or after successful participation in five out of seven individual modules and the advanced course exam you will receive the “KNX building control technician” certificate. All KNX basic and advanced courses that you have successfully completed will be counted towards your certification.

Gamma training kit for training and presentations
The theory you learn in the training courses can now be put into practice with the help of our Gamma training kit. It can be used to learn the most important functions of the Gamma building control system and to demonstrate them clearly. This includes: lighting and shading control, heating/cooling simulation and the control of security systems – for example, alarm signals via window contacts.

The Gamma training kit is especially valuable for vocational schools, trade guilds and other educational institutions. It can be used for specialized training in building control applications.

The kit is available in two versions: as a DALI or school version.

Highlights
■ Fit for KNX, IP and DALI – for greater comfort, security and cost efficiency in buildings
■ Comprehensive, certified training program
■ Advanced training to become a KNX building control technician
■ Practice functions and demonstrate them clearly with the Gamma training kit
Overview of courses

Training courses for KNX building control technicians

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>KNX basic course BC-KNXBK, 5 days</td>
<td></td>
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<tr>
<td>KNX advanced course BC-KNXA1, 5 days</td>
<td></td>
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<tr>
<td>KNX/DALI diagnosis/troubleshooting BC-KNXD, 2 days</td>
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<tr>
<td>IP basics KNXnet/IP BC-IPB, 2 days</td>
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<tr>
<td>Web visualization BC-IPWV, 1 day</td>
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<tr>
<td>Lighting, control and monitoring with KNX BC-BBB, 2 days</td>
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<tr>
<td>Integrated applications Gamma/Synco BC-GSYNCO, 1 day</td>
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<tr>
<td>Temperature and climate control with KNX BC-RMCTL, 2 days</td>
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<tr>
<td>Building shading, control logic and functions with KNX BC-WCTL, 2 days</td>
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</tbody>
</table>

Advanced course examination

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>KNX trainer seminar BC-KNXT, 3 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNX certificate courses Overview of courses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ongoing courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNX trainer seminar BC-KNXT</td>
<td></td>
<td>3 days</td>
</tr>
<tr>
<td>ETS3/4 to ETS5 conversion course BC-ETSSUP</td>
<td></td>
<td>1.5 days</td>
</tr>
</tbody>
</table>

KNX basic course BC-KNXBK, 5 days

KNX advanced course BC-KNXA1, 5 days

KNX trainer seminar BC-KNXT, 3 days

Learning goal

Learning goal

- KNX technology
  - Installation and mounting guidelines
  - Design of the bus devices
  - Design and function of the ETS
  - Planning and commissioning of a sample project with the most important building control functions

Capabilities of KNX building control:

- Lighting control
- Logic, scenes
- Various transmission media
- Display and operation
- HVAC applications
- Safety technology, remote control and alarming
- Remote parameterization and maintenance of KNX systems

Bus systems in building control and automation technology
- Structure and functions of the KNX Association
- Requirements for KNX training institutions
- KNX certification procedure
- OSI reference model and data transmission technology, with focus on KNX
- KNX microcontrollers
- Acquisition of in-depth ETS knowledge
- Regulations, standards, installation and mounting instructions

Content

- KNX technology
- Installation and mounting guidelines
- Design of the bus devices
- Design and function of the ETS
- Planning and commissioning of a sample project with the most important building control functions

Capabilities of KNX building control:

- Lighting control
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- Remote parameterization and maintenance of KNX systems

Knowledge of VDE 0100 installation technology and experience working with Windows PC

Participation in the KNX basic course and practical experience with ETS and KNX projects

Successful participation in the KNX basic course and KNX advanced course as well as knowledge of presentation techniques and adult education

Requirements

- Knowledge of VDE 0100 installation technology and experience working with Windows PC
- Participation in the KNX basic course and practical experience with ETS and KNX projects
- Successful participation in the KNX basic course and KNX advanced course as well as knowledge of presentation techniques and adult education

Target group

- Commissioning engineers, project planners, service personnel, maintenance staff
- Planners and installers of KNX systems, service personnel, project managers and teams
- Trainers, teachers, lecturers, trainers in adult education

Exam

Practical and theoretical KNX exam (duration: 2 x 1.5 hours)

Final practical exam (duration: 2 hours)

Final theoretical exam (duration: 1.5 hours)

Additional information

The practical component of KNX certificate courses comprises about 50 percent.

Certificate

After passing the respective exam, you will receive the corresponding KNX certificate.
<table>
<thead>
<tr>
<th>Course title</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-IPWV</td>
<td>Previous participation (prerequisite: Web visualization for the KNX bus system)</td>
</tr>
<tr>
<td>BC-IPB</td>
<td>Application-specific courses</td>
</tr>
<tr>
<td>BC-KNXD</td>
<td>Additional information</td>
</tr>
<tr>
<td>BC-ETS5UP</td>
<td>KNX certificate courses</td>
</tr>
<tr>
<td>BC-RMCTL</td>
<td>Additional information</td>
</tr>
<tr>
<td>BC-BBB</td>
<td>Additional information</td>
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<tr>
<td>BC-KNXA1</td>
<td>Additional information</td>
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</tbody>
</table>
**KNX in action – a case full of knowledge**

**Fit for KNX, IP and DALI**
Anyone who wants to work with the pioneering Gamma building control system must be trained on KNX, IP and DALI. Because it’s KNX that connects the disciplines lighting, shading, heating and ventilation – for greater comfort, security and cost efficiency. KNXnet/IP offers solutions for location-independent networking, while the DALI bus is increasingly gaining acceptance in lighting technology. With the Gamma training kit, you can clearly demonstrate to your customers the use of the Gamma building control.

**For use in schools**
The Gamma training kit is of particular interest to vocational schools, trade guilds and other educational institutions. For what’s the use if an electrical apprentice can manage standard jobs like wiring, but has no idea what to do with KNX, IP and DALI?

**Demonstrating numerous functions**
Every building places different demands on building control. That’s why you can use the Gamma training kit to simulate a variety of applications:
- Conference rooms: dimmable lighting, blinds, heating, cooling, window contacts, wind alarm
- Staircase: lighting
- Offices: dimmable lighting, blinds
You can also control all functions wirelessly using the IR hand-held transmitter.

**The right equipment for every requirement**
The Gamma training kit offers maximum flexibility. The functions in detail:
- 6 x dimmable LED lights
- 6 x dimmable LED lights with DALI
- 4 x blinds simulation proportional with slat position
- Windows open/closed simulation
- Heating/cooling simulation proportional with LED
- Exchangeable images of models
- Separate flush mounting application modules
- Display using touch panel and LAN module

You can upgrade or modify the Gamma training kit at any time depending on your requirements. We have left plenty of room for your ideas. It’s even possible to connect additional devices via KNX, IP or DALI using plug-in connectors. The version of the Gamma training kit that can be seen in the images is just one variant. Our modular concept allows for a whole spectrum of combinations and equipment options, especially regarding the user interface.

**Easy to handle in a trolley case**
We offer the Gamma training kit in a trolley design. It is operated entirely from the front and so is very clearly laid out. The case also gives you storage space for accessories. All components including the distribution board panel, built-in devices and control elements are from Siemens. This ensures that they all match.

**How to purchase the Gamma training kit**
Your regional Siemens representative will be pleased to provide you with the latest order information and price list.

**Highlights**
- Fit for KNX, IP and DALI – for greater comfort, security and cost efficiency
- Demonstrate the Gamma building control clearly
- Gamma training kits can be upgraded or modified at any time
- Also available as easy-to-handle trolley case and ready to use

**Numerous applications**
Can be easily simulated with the Gamma training kit.