

Superlative Holiday Resort

Future-proof KNX concept guarantees growth and flexibility

Winner
KNX Award 2010
Category
Special



The Navarino Resort has one of the most extensive KNX installations in Greece

Lovers of luxurious holidays will now find their paradise in one of the most beautiful holiday regions of Greece. The first part of the Navarino Resort in the southwestern Peloponnese was opened in time for the 2010 season. Two hotel complexes with 766 rooms and suites, 265 private pools, a golf course, sports, spa and therapy facilities and conference rooms await the visitor. A total of 750 staff are ready to spoil their guests. You only need to imagine the white sandy beaches, the turquoise color of the lagoons, the Greek sun and shady woods – and your dream is perfect.

The KNX system installed at the resort can boast similar superlatives: to organize 6,000 KNX units, 190 main distribution points, 16 zones, 198 lines and 18,000 group addresses was a considerable challenge for the system integrator GDS Digital System Ltd. – not least because this had to be accomplished taking into account the planned expansion of the complex to four times its current size by 2015. Unless a future-proof concept had been found, the KNX system would have been stretched beyond its limits in trying to accommodate the expanding building services. This was all of this reason for the jury to select the project for the Special Award.

Guarantee for energy efficiency, comfort and security

Environmental protection is of great importance in Navarino: trees were uprooted and replanted, water cisterns were built, solar collectors installed etc. The plan right from the beginning was also that the resort should be operated with zero emissions.

By controlling air and monitoring the automatic conditioning system, controlling and dimming the lighting system automatically in accordance with demand and activating cooling and shading functions at the right time, KNX makes a contribution. In addition, KNX ensures comfort and security. Lighting scenarios can be called up to bring about the desired lighting mood, sensors control the lighting of the building and media control. KNX also ensures that conferences run smoothly and, through

the integration of fire alarm and evacuation systems, it is possible to trigger the correct building services functions in emergencies. Likewise, remote control and maintenance of the complete KNX system was part of the initial design.

Expansion possibilities with KNX

Central operating and monitoring facilities have been installed in all five receptions. A visualization of the complete installation is used to operate these facilities. In the coordination of all this necessary data, the system integrator has demonstrated his extensive experience with KNX. In order to manage all building services functions centrally, it was necessary to link up the main distribution points with thousands of kilometers of cable. The installation relies on various media, i.e. TP, LWL, as well as, locally, IR and RF. This is managed powerfully via the KNXnet/IP package. In order to maintain an overview of the many items of equipment and functions, subsystems were formed, each with the same group address, which can be distinguished from the center using specially programmed routers. This means that the KNX installation remains open and flexible for further expansion.

Ultimately it is also this flexibility which persuaded the designers and clients to opt for KNX. Compared with other systems, the flexible installation and reduced installation time, interfaces with other systems, extensive range of products available, trained technicians and the option for structured programming all spoke for KNX.

Benefits provided by KNX in this project

- Versatile applications for lighting, solar screening and air conditioning.
- Options for managing the whole range of building services centrally.
- Remote monitoring and maintenance.
- Compatibility with different media and protocols, such as twisted pair, optical fiber and KNXnet/IP for coping with large distances.
- System flexibility for coping with changes and expansion.

Technical refinements

- In order to be able to cope with the enormous number of addresses required for the successive expansion of this gigantic KNX project, it was necessary to divide the KNX system into sub-systems. The resulting identical group addresses can be recognised by the visualization at the central merging point of the sub-systems via specially programmed routers. This allows central management with access to all functions.
- Redundant cable installation and power supply increases the availability of the system.

Companies involved

Building owner:

Temes S.A, Athens, Greece

Architect:

Meletitiki – Alexandros N. Tobazis and Associates, Architects, Athens, Greece

Electrical Services Engineer:

Triedros Melititiki S. A., Athens, Greece GDS Digital System LTD, N.Eritrea, Greece

System integrator:

GDS Digital System LTD, N.Eritrea, Greece



Luxury suite with view of the Costa Navarino