

KNX Association

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Cruise Ship MS Belle de l'Adriatique

Safety and Convenience on the Open Sea



Picture 1. The MS Belle de l'Adriatique cruises safely with the right light atmosphere through the Mediterranean Sea.

The MS Belle de l'Adriatique cruises along the Croatian coast, crosses the Mediterranean Sea and goes as far the Canary Islands. The construction of the ship was started in France, and it was then transferred across the Rhine River to Brussels where the upper decks and the interior were finished.

The ship has more than 100 tastefully decorated cabins in different categories and provide room for more than 200 passengers. The 110 meter long and 12 meter wide ship cruises with 16 knots.

Apart from the high comfort demands, a large cruise ship needs to meet stringent requirements with regard to safety.

The switchover of the lights in common rooms and corridors to emergency power has to be performed in a very short time. The ship's crew must have control over this functionality at any time. KNX as a decentralized bus system is ideal for this type of application. The bus system was also utilized to create different lighting moods on the ship. The light conditions can be adjusted to the desired mood and background music in assembly rooms like the restaurants, bar and the piano bar.

Benefit of KNX for this Project

- The high demand of the safe switchover of general lighting to the emergency power supply through diesel generators and batteries is provided and monitored by the decentralized KNX bus system.
- The light conditions can be adjusted to the desired mood and background music in assembly rooms like the restaurants, bar and the piano bar.

Project-Nr.: SI-08-D

Country: Luxembourg

Type of Building

RESIDENTIAL

- Single Family Home
- Apartment Building
- Senior citizen home
- Assisted living

COMMERCIAL

- Office / Public Administration Building
- Business
- Entertainment
(Cinema, Theater, Museum, etc.)
- Health Care
- Educational (School, University, etc.)
- Recreational (Sport, Wellness, etc.)

Industrial

OTHER

Trade / Systems

Lighting

- Shading / Daylighting Control
- Heating, Ventilation, Air-Conditioning
- Household appliances
- Alarm Systems

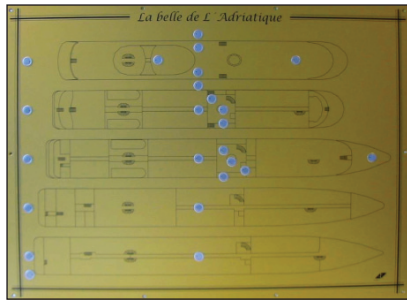
Monitoring

- Energy Management System
- Smart Metering
- Audio/Video
- Visualization
- Interface to other Systems
- RemoteControl and Administration

Other Application

Size

- Number of Areas / Lines: 1/2
- Number of KNX Devices: approx. 80



Picture 2. The keypad at the command bridge – customized to the ship's design – with direct connection to KNX to control and monitor all the lights on all decks.



Picture 3. The unique mix of sound and light in the ballroom make for a pleasurable dancing experience.

Important Benefits of KNX Even for Ship Builders

The open and flexible standard technology convinced the builders of the MS Belle de l'Adriatique to utilize KNX for this large ship. The implementation was performed by the experienced system integrator Bastec from Luxemburg. The regulations for international ship builders require that the lighting system in circulation spaces, outside areas and restaurant rooms can be switched over to emergency power at any time. The KNX system controls the switch over to the generator and afterward to the low voltage power supply system which supplies the emergency light with the necessary energy for battery operation mode.

The lighting system is monitored and controlled through a keypad at the command bridge – customized to the ship's design – with direct connection to KNX. The operating panel is a customized product in color, size and functionality

and allows the central control of the general lights on all five decks. The operating keys are round flat metal push buttons with integrated LED as status indicator. The push buttons and LEDs are connected to the KNX bus couplers with direct parameter driven functionality and are directly supplied by the KNX bus voltage.

Lights Tuned to the Music

KNX technology is not only applied in the area of safety but also for entertainment applications on the MS Belle de l'Adriatique. The DJ can apply different lighting scenarios with a twenty button mixer that is directly connected to the dimming actuators through KNX. This creates a unique mix of sound and light in the ballroom for a pleasurable dancing experience. Thanks to the decentralized setup and parameterability, the system can be adjusted to changing needs and is expandable.

Sophisticated Features

- The lighting system in the ballroom can be adjusted to the music. This created the right mood for every music piece.
- A specially customized control panel at the command bridge of the ship allows the monitoring and control of the system. The push button and LEDs are directly connected to KNX bus coupler and supplied by the bus voltage.

Involved Parties

Electricians:

Simec SA,
F-67240 Bischwiller

KNX Systemintegrator:

BASTEC s.a.r.l.,
L-8030 Strassen



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Award



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