

Moov Hotel

CURITIBA, BRAZIL

INTRODUCTION

Moov Hotel Curitiba, in the capital city of Paraná, Brazil, offers 123 suites in a LEED Platinum-certified building. Moov Hotel Curitiba is one of six Moov properties in Portugal and Brazil operated by Endutex Group, all of which combine contemporary design with affordable quality. Moov Hotel Curitiba earned exceptionally high marks on the LEED certification scale for its sustainable site, water efficiency, and energy performance.

PROJECT DETAILS

Reliable Controls Authorized Dealer SITEK installed a Reliable Controls building automation system that controls lighting, heating, and cooling equipment, external air-treatment units, smoke-control dampers, solar water-heating plates, wastewater and sewer pumps, and rainwater collection in the hotel.

SITEK took control of the facility's mechanical equipment with MACH-ProSys and MACH-ProCom controllers extended with MACH-ProPoint expansion modules, plus four MACH-Pro2 controllers and four MACH-ProZone controllers, all of which communicate using BACnet. Some of the air-handling and energy-monitoring equipment is integrated into the Reliable Controls system via Modbus RTU using dedicated ports on the MACH-ProSys and MACH-ProCom controllers.

Facility managers use RC-WebView, a browser-based building management solution that delivers the power of enterprise tools with a simple interface, to monitor the control system at a glance. For additional resilience, SITEK also installed a MACH-ProWebSys, which combines a BACnet Building Controller, a BACnet Operator Workstation, and a powerful webserver in a compact package.

The biggest challenge was to implement a solution to control legionella, the bacterium that causes Legionnaires' disease. Legionella bacteria do not survive temperatures above 60°C, so SITEK programmed the setpoint for water used in air-conditioning units and cooling towers to increase from 50°C to 85°C for 30 minutes overnight during low water-consumption hours.

The integration of an enthalpy wheel, or energy recovery wheel, is another interesting aspect of this project. The enthalpy wheel uses thermal energy from exhaust air to precondition fresh, incoming air. This improves efficiency by reducing the energy needed to cool in summer and heat in winter. The hotel also uses a rainwater-harvesting system for flushing toilets to reduce potable water consumption.

SITEK was pleased to install a simple, flexible, sustainable Reliable Controls system that helped the project achieve LEED certification and will provide lasting benefits to Moov Hotel Curitiba for years to come.

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MARKET SEGMENT
 Hospitality

PROJECT TYPE
 New construction

INSTALLATION TYPE
 HVAC, lighting

NETWORK TYPE
 BACnet, Modbus

TOTAL AREA
 5,350 m² (57,586 ft²)

PROTOCOL
 BACnet, Modbus

INSTALLED EQUIPMENT
 4 MACH-Pro2™ controllers
 4 MACH-ProCom™ controllers
 20 MACH-ProPoint™ Input expansion modules
 10 MACH-ProPoint™ Input/Output expansion modules
 2 MACH-ProSys™ controller
 1 MACH-ProWebSys™ controller
 4 MACH-ProZone™ controllers
 RC-WebView® software

TOTAL SYSTEM OBJECTS
 2,960

RELIABLE CONTROLS AUTHORIZED DEALER

